MARCH, 1960

THE Lumberman

LUMBER PLYWOOD BOARD WOOD MANUFACTURING

Panels from Refuse Plant produces salable products using cull lumber, mill ends, low grades and dunnage

Page 36

New Log Decking System effectively handles logs for new California mill, eliminates the need of a log pond.

Page 40

Salesmen from Within the Ranks are developed in program emphasizing knowledge of all phases of the industry.

Page 42

Chipping Center increases residue utilization in New England. Single plant takes refuse of 11 neighboring mills.

Page 46

Shave conveying costs with LINK-BELT woodyard chains

On even the heaviest of woodyard conveyors, around either lumber or pulp mills, these Link-Belt chains give you the staying power necessary to keep operating and maintenance costs at a minimum.

C Class combination chain with steel sidebars, and center links of malleable or *Promal*, is a favorite conveying chain throughout the industry. Specify file-hard *Promal* for highly abrasive conditions (as with sandy bark) and for the extra strength and wear resistance demanded by heavy loads. And for even heavier duty conveyors, SS Class bushed chain is interchangeable on the same sprockets.

For further facts, contact your nearest Link-Belt office or authorized stock-carrying distributor listed under CHAINS in the yellow pages of your phone book. Or write for our new, comprehensive Catalog 1050.

LINK-BELT

CHAINS AND SPROCKETS

LINK-BELT COMPANY: To Serve Industry There Are Link-Belt Plants, Sales Offices and Warehouses at San Francisco 24, Los Angeles 22 (Montebello), Seattle 4. Sales Offices and Warehouses at Portland 10, Spokane 10, Salt Lake City 1. Stock Carrying Distributors in Principal Areas. 15,087

A million miles a year...injector life up 750% using Detergent-Action diesel fuel

Four and a half million miles ago, Humboldt Fir Company, Redding, California, started using Chevron Diesel Fuel with new Detergent-Action in their truck fleet. Now injectors average 375,000 miles before replacement—last seven and a half times longer than before.

"Detergent-Action helps us save plenty," says manager Don Cantrell. "It's hard to give exact figures . . . but look at maintenance alone. We've replaced just 12 sets of injector nozzles in the last three years. No wonder Humboldt is sold on Chevron Diesel Fuel."

Humboldt's big rigs depend on another Standard product to cut overhaul costs. RPM DELO Supercharged #1 Oil helps them go 300,000 miles before major overhaul.

Equipment notes: Humboldt Fir operates nine Cummins-powered Kenworth and Peterbuilt diesels. Steep mountain grades mean hard miles . . . 210,000 a year per truck . . . up to 700 a day hauling veneer and lumber.

Truck Maintenance problems? A technically qualified Standard Engineer will help you solve them. His practical experience and the wide range of top-quality Standard products assure an economical solution to your maintenance problem.

The largest field force of lubrication engineers in the West is at your service. For this valuable free technical help, just call your local Standard office, or write Standard Oil Company of California, 225 Bush Street, San Francisco 20.

CHEVRON DIESEL FUEL

STANDARD OIL COMPANY OF CALIFORNIA

TRADEMARKS CHEVRON AND "CHEVRON" DESIGN REG. U.S. PAT. OFF.

Photo shows portable pump unit connected to internal combustion engine by a Type F FALK Steelflex Coupling

How FALK STEELFLEX Couplings give your connected machinery Double Protection

FIRST: *They protect against shaft misalignment.* Some degree of shaft misalignment is unavoidable—and unless protective compensation is provided, additional loads are developed on shafts, bearings and other revolving elements. The result is excessive wear-and-tear—and often actual breakage....FALK Steelflex Couplings compensate for either angular or parallel misalignment—*or for the more serious condition involving both!* The exclusive Steelflex gridmember which joins the two hubs is not fastened to either hub; thus, either hub can shift in any direction without imposing a load on the other hub.

Yet, important as protection against shaft misalignment is to you, it is only one function of the *truly flexible* FALK Steelflex Coupling.

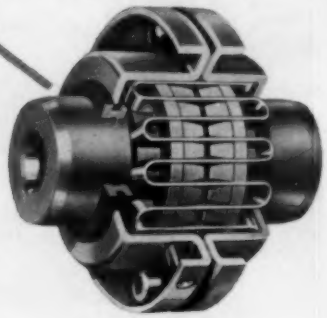
SECOND: *They protect against torque fluctuations* which create excess wear on connected machines and frequently induce destructive shaft misalignment. The exclusive FALK Steelflex grid-groove design cushions shock loads, dampens vibration, reduces impact loads as much as 30 per cent. You get this extra margin of protection that *can mean the difference between operating and breakdown!* You save on maintenance costs. And —you prolong the service life of your machines!...For complete information, ask your FALK Representative or Authorized Distributor. Or—**write direct for Bulletin 4100.**

FALK and STEELFLEX are Registered Trademarks

THE FALK CORPORATION, MILWAUKEE 1, WISCONSIN

Representatives and Distributors in Most Principal Cities

Manufacturers of Quality Gear Drives and Flexible Shaft Couplings



Basic Type F FALK STEELFLEX COUPLING fills the needs of 90% of industrial applications

This cutaway view shows the exclusive Steelflex design which provides *torsional resilience with the strength of steel.* This torsional resilience spreads peak or shock loads over a relatively long increment of time, thus *greatly reducing stresses* in connected machinery.

The versatile Type F Steelflex can be used horizontally or vertically, without modification or special parts. It is ideally suited to 9 out of 10 applications. For unusual applications involving overload conditions, extended shafts, brakes, etc., standard designs of dual-purpose Steelflex couplings are available.

For most applications, you can give your machines the extra protection afforded by FALK Steelflex Couplings at no extra cost!

FALK

...a good name in industry

For Greater Flexibility in your LOG HANDLING PROBLEMS —

The NORTHWEST TRUCK CRANE!

Whether it's a handling problem at the mill, decking in the woods, roadwork, or cleaning up the lost logs along the right-of-way, your Northwest brings you the versatility and dependability that cuts logging costs.

Your Northwest is always ready to go! We hear it everywhere, and Northwest owners will tell you so.

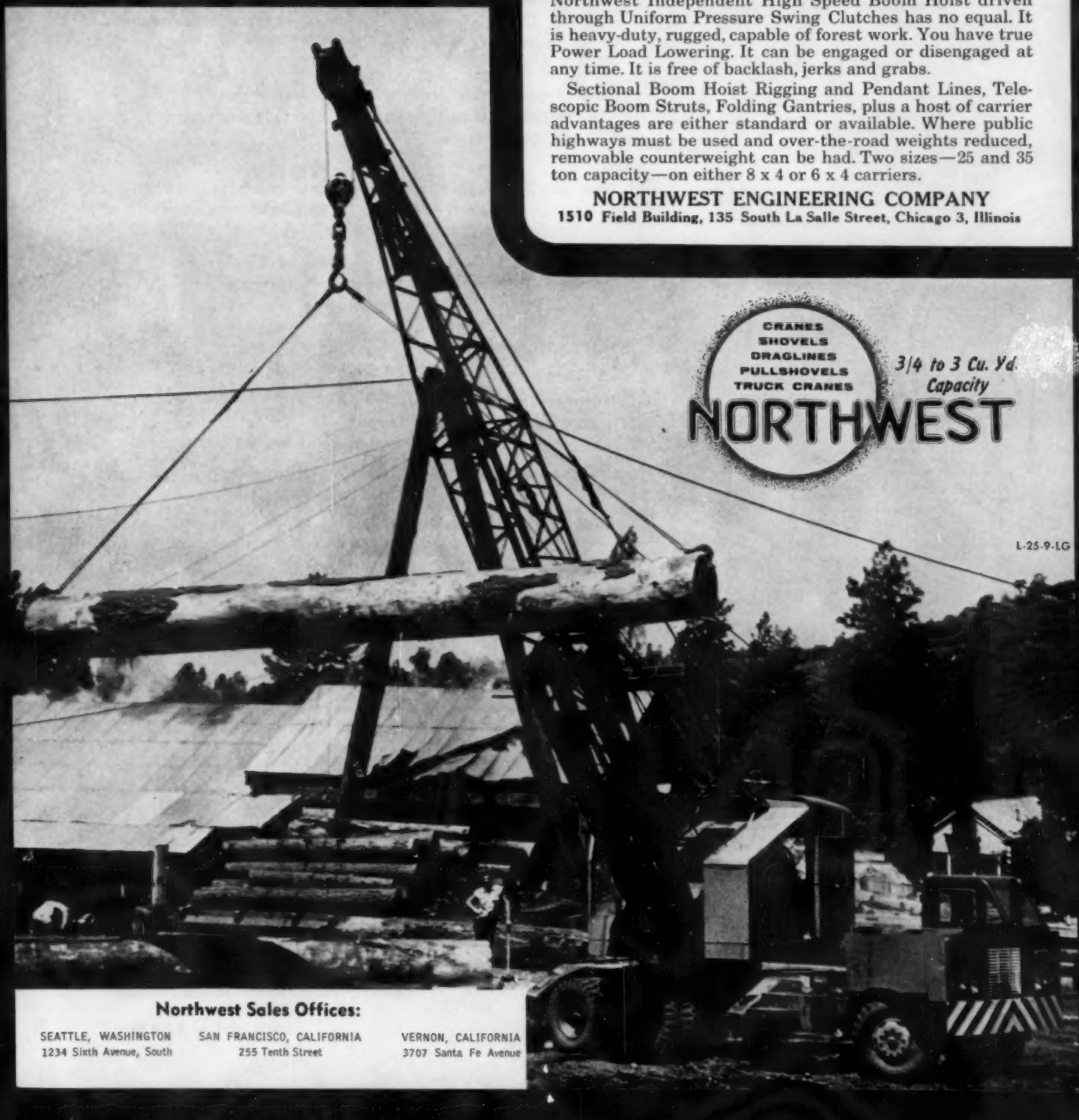
Here is the smooth accuracy of the Feather-Touch Clutch Control—mechanical with the feel of the load and sharp response—no pumps, compressors or other delicate mechanism—convertible to straight manual at any time—control failure can't shut you down. You spot your load where you want it. Uniform Pressure Swing Clutches eliminate jockeying to hit the truck, no jerks or grabs—faster, safer!

A heat treated cast alloy Steel Rotating Base with Cast Steel Machinery Side Frames keep shafting in alignment and hold wear to a minimum. The drive from the engine is through Helical Gears running in an oil bath—no chains to whip, stretch, adjust or break.

If you are using a standard boom you have a wide range of equipment to bring versatility to your problems. The Northwest Independent High Speed Boom Hoist driven through Uniform Pressure Swing Clutches has no equal. It is heavy-duty, rugged, capable of forest work. You have true Power Load Lowering. It can be engaged or disengaged at any time. It is free of backlash, jerks and grabs.

Sectional Boom Hoist Rigging and Pendant Lines, Telescopic Boom Struts, Folding Gantries, plus a host of carrier advantages are either standard or available. Where public highways must be used and over-the-road weights reduced, removable counterweight can be had. Two sizes—25 and 35 ton capacity—on either 8 x 4 or 6 x 4 carriers.

NORTHWEST ENGINEERING COMPANY
1510 Field Building, 135 South La Salle Street, Chicago 3, Illinois



Northwest Sales Offices:

SEATTLE, WASHINGTON
1234 Sixth Avenue, South

SAN FRANCISCO, CALIFORNIA
255 Tenth Street

VERNON, CALIFORNIA
3707 Santa Fe Avenue

VOLUME 87 • NUMBER 3

MARCH, 1960

EDITORIAL STAFF

W. E. CROSBY.....Editorial Director
DEAN F. SHERMAN.....Editor
LEE R. FLATBERG.....Managing Editor
STANLEY M. JEPSEN.....Associate Editor
HAROLD H. KEIL.....Associate Editor
HERBERT G. LAMBERT.....Associate Editor
CHARLES L. SHAW.....Canadian Editor

BUSINESS STAFF

JAMES C. WALLACE.....Business Manager
CHARLES W. COWMAN.....Sales Manager
J. B. OLSON.....Special Services Sales Manager
JOHN LAUGHLIN.....Production Manager
CHARLES C. BAAKE.....Circulation Manager

PUBLISHING OFFICES

PORTLAND 5, OREGON
731 S. W. Oak St., CApitol 2-1314
Cable: Milfreepub

ADVERTISING OFFICES

PORTLAND 5, OREGON
731 S. W. Oak St., CApitol 2-1314
C. W. Cowman, J. C. Wallace, J. B. Olson
SEATTLE 4, WASHINGTON
71 Columbia St., MAin 2-1626
Cable: Milfreepub
SAN FRANCISCO 5, CALIFORNIA
500 Howard St., EXbrook 7-1881
Stuart F. Leete
Cable: Milfreepub
VANCOUVER 3, B. C.
402 Pender St., W., MUtual 5-7287
C. L. Shaw
Cable: Milfreepub
LOS ANGELES 65, CALIFORNIA
3501 Eagle Rock Blvd., CLinton 5-7194
Raul Rodriguez
NEW YORK 17, NEW YORK
370 Lexington Ave., MUrray Hill 3-9294
Cable: Milfreepub
CHICAGO 26, ILLINOIS
1791 Howard St., ROgers Park 4-3420
Kenneth A. Kruse
Cable: Milfreepub
CLEVELAND 3, OHIO
4500 Euclid Ave., EXpress 1-4180
LONDON W.1, ENGLAND
130 Crawford St. (Corner Baker St.)
Cable: Milfreepub
Bernard W. Lansdowne,
Manager, United Kingdom
KÖLN-MERHEIM, WEST GERMANY
28, Attendorner St.
Dr. Walter F. Vogeno, Director
Continental European Operations
Cable: Milfreepub

PUBLISHED monthly, except in December when semi-monthly, by MILLER FREEMAN PUBLICATIONS, 731 Southwest Oak Street, Portland 5, Oregon. Entered as second-class matter at the Post Office at Portland, Oregon, under Act of March 4, 1879.

ADVERTISING—Complete plates only should be sent to: THE LUMBERMAN, 102 N.W. Ninth Ave., Portland 9, Oregon. Advertising copy and cuts, insertion orders and all instructions should be sent to the publishing office: 731 Southwest Oak Street, Portland 5, Oregon.

Member of
Audit Bureau of Circulation
and The Associated
Business Publications

SUBSCRIPTION RATES—U. S., Canada, Mexico and other Pan American Union members—One year $4.00; two years $6.00; three years $8.00. Other countries—one year $5.00; two years $8.00; three years $11.00; Single copy 50 cents except Annual Plywood Review number $1.00.

CHANGE OF ADDRESS—Send subscription orders and changes of address to Subscription Department, THE LUMBERMAN, 500 Howard Street, San Francisco 5, California. Include both old and new address and zone number.

COPYRIGHT, 1960, by Miller Freeman Publications, Incorporated. Contents may not be reproduced without permission.

POSTMASTER: Please send Notice 3579 to THE LUMBERMAN, 500 Howard St., San Francisco 5, California.

A MILLER FREEMAN PUBLICATION

OFFICERS

WILLIAM B. FREEMAN.....President
MILLER FREEMAN, JR.....Executive Vice President & Treasurer
MAX F. HOLSINGER.....Vice President, International Operations

THE Lumberman

LUMBER PLYWOOD BOARD WOOD MANUFACTURING

Let's Have a Big Show! (Editorial).....35

Salable Panels from Refuse U. S. Blockboard Corp., Red Bluff, Calif., produces door cores, plywood cores and furniture stock from sawmill residues. 36

Firm Progressively Updates Mill New units at C. M. Christiansen Co., Phelps, Wis., include planing mill, kilns, debarker. 38

New Log Decking System consisting of concrete runways and spray system handles logs and feeds new sawmill of Placerville Lumber Co., Placerville, Calif. 40

Salesmen from Within the Ranks are developed by Calumet & Hecla, Inc., at Goodman, Wis., through extensive on-the-job training at the mill so they will know the products they sell. 42

Northwest Hardwood Industry faces bright future. An expert outlines future potentials. 44

Chipping Center Increases Residue Utilization 46

Logs to Wood Fiber . . . Story of Nu-Wood 64

Automatic Tipple Upgrades Green End Operation 66

Giant Laminated Beam Produced in Canada 66

California Plant Produces Veneer from Madrone 68

Metal Detector Protects Equipment by spotting tramp metal in chip material before it enters machines. 71

DEPARTMENTS

Significant Industry News	8	Forest Products Stocks	74
Industry Meetings	15	Lumber Prices	85
Industry Trends	16	Machinery & Equipment	88
Saw Filer's Room	46	Buyers' Guide	94
Job Saver	63	Advertisers' Index	106

YOU CAN TELL THE DIFFERENCE

...when you use

SIMONDS MACHINE KNIVES

Whether you use Planer Knives, Shaper Steel, Veneer Knives, Chipper Knives, Paper Trimmer or Sheeter Knives, Hog Knives or Special Purpose Knives, it makes good sense to specify SIMONDS because it will really show up in your performance records and knife costs. You *can* tell the difference!

The reason . . . SIMONDS KNIVES start with Simonds Steel . . . special alloy steel that is poured, forged and rolled in Simonds own steel mill — specific formulas for specific cutting jobs. Heat treating in Simonds "Controlled Conditions" Plant follows detailed procedures that insure exactly the right hardness, toughness and edge-holding qualities to give top on-the-job results.

Take Simonds Thin Planer Knives for example: They're made to hold a keen edge, wear evenly, stand high operating temperatures without softening, and stay in the cutting circle with each knife doing an equal share of the work. As a result, they cut smoother longer, stand up better under today's faster feeds and higher production requirements.

Simonds Chipper Knives are outstanding for their toughness, edge-holding ability and shock-resistant qualities. Simonds new "Royal Chinook" Veneer Knife, proclaimed "the new standard of the industry," has extra resistance to nicking, dodging or breaking out — drastically reduces costly downtime for honing or re-sharpening. Simonds "Si-Namic" Paper Knife actually stays sharp up to 100% longer than any other standard knife on the market — provides premium quality performance at regular price!

Simonds Steel plus Simonds know-how, based on years of experience in knife manufacture, are your assurance of superior performance and complete satisfaction from every type of knife. Try SIMONDS next time you need knives for *your* machines . . . you *can* tell the difference! Call your nearby Simonds Distributor for details.

INDUSTRIAL DISTRIBUTORS · SERVING INDUSTRY ECONOMICALLY · THE RIGHT HAND OF PRODUCTION

Your nearby SIMONDS DISTRIBUTOR is your most dependable cutting tool supply source. His stocks and services are designed with your convenience and economy in mind. Call him FIRST for all your industrial supply needs!

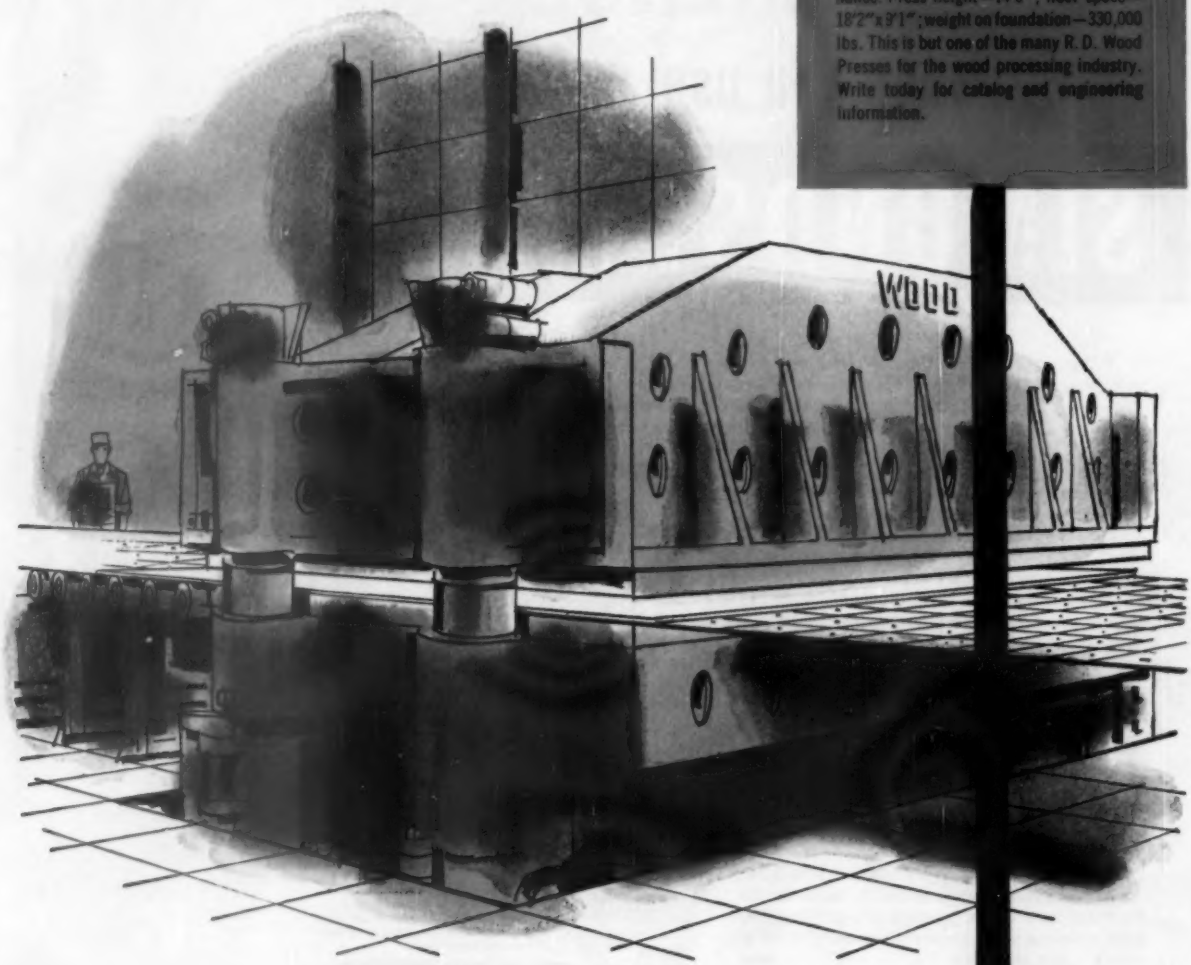
SIMONDS
SAW AND STEEL CO.
FITCHBURG, MASSACHUSETTS

Factory Branches in Boston, Chicago, Shreveport, La., San Francisco and Portland, Oregon, Canadian Factory in Montreal, Que.
Simonds Divisions: Simonds Steel Mill, Lockport, N.Y., Heller Tool Co., Newcomerstown, Ohio, Simonds Abrasive Co., Phila., Pa., and Arvida, Que., Canada

You can design your own press at R. D. Wood

Working with numerous basic models, R. D. Wood engineers incorporate your specifications and modifications to produce the press exactly suited to your needs. You can be sure of its quality, too. For every Wood Press is constructed of selected materials by master craftsmen. This is your warranty of dependable performance and precise operation. Why not consult us when planning your next hydraulic press?

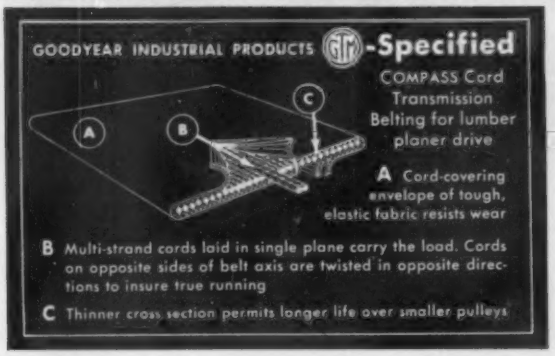
1200 ton R. D. Wood Hydraulic Press for the manufacture of composition board. Platen size—13'10" x 9'1"; operating daylight—3", open to 24" for inspection and maintenance. Press height—14'0"; floor space—18'2"x9'1"; weight on foundation—330,000 lbs. This is but one of the many R. D. Wood Presses for the wood processing industry. Write today for catalog and engineering information.



R. D. WOOD COMPANY

PUBLIC LEDGER BUILDING • PHILADELPHIA 5, PENNSYLVANIA

Operating a lumber mill planer 16 hours a day—day in, day out—is a pretty rugged proposition. What's the best way to belt it for such taxing duty, this Northwest timberman asked the G.T.M.—Goodyear Technical Man. The answer: COMPASS CORD Transmission Belting with its endless, load-carrying cord muscles. And the result: five full years of trouble-free service—more than twice normal belt-life in this type work. And in that time, the planer smoothed 250,000,000 board-feet of lumber—the yield of over 40 timbered acres.


GOODYEAR INDUSTRIAL PRODUCTS GTM-Specified
COMPASS Cord Transmission Belting for lumber planer drive
A
B
C
A Cord-covering envelope of tough, elastic fabric resists wear
B Multi-strand cords laid in single plane carry the load. Cords on opposite sides of belt axis are twisted in opposite directions to insure true running
C Thinner cross section permits longer life over smaller pulleys

Whenever *you* are tooling up for a particularly tough operation in *your* plant, check with the G.T.M. He has a wealth of experience in the proper application of rubber products.

And he's always available in short order. Just ask your Goodyear Distributor—also your best source for the best Hose, V-Belts, Flat Belts and other industrial products. His number's listed under "Rubber Goods" or "Rubber Products" in the Yellow Pages—or write Goodyear, Industrial Products Division, Akron 16, Ohio.

Compass—T. M. The Goodyear Tire & Rubber Company, Akron, Ohio

THE BIG NAME IN TRANSMISSION BELTS:

GOODYEAR

THE GREATEST NAME IN RUBBER

significant industry news

General Outlook . . .

PARTICLE BOARD ASSOCIATION ESTABLISHED . . . National Particleboard Association has been established and David C. Greeley, Weyerhaeuser Co., Tacoma, Wash., will serve as its first president. A major activity of the group will be to establish industry standards. Charter company members are: Brownsville Particle Board & Associated Products, Inc., Brownsville, Ore.; Carolina Forest Products, Inc., Wilmington, N. C.; Chapwood, Inc., Philomath, Ore.; Formica Corp., Farmville, N. C.; Gray Products Co., Inc., Waverly, Va.; International Paper Co., Longview, Wash.; National Starch & Chemical Corp., New York City; Pacqua, Inc., Dillard, Ore.; Pope & Talbot, Inc., Portland, Ore.; Rock Island Millwork Co., Rock Island, Ill.; Roddiscraft, Inc., Marshfield, Wis.; Superwood Corp., Duluth, Minn.; Swain Industries, Seymour, Ind.; United States Plywood Corp., New York City; West Virginia Pulp & Paper Co., Tyrone, Pa.; Weyerhaeuser Co., Tacoma, Wash.; Willamette Fiber & Chipboard Co., Sweet Home, Ore.; Wood Fibreboard Co., Albany, Ore.; Wynnewood Products Co., Jacksonville, Tex. The main office of the group will be in Washington, D. C.

REDWOOD PUSH FOR SALES . . . A series of three redwood wholesale conferences are scheduled by the California Redwood Association: April 29 at Dallas, Tex., May 9 at Rockford, Ill., and May 13 at Columbus, Ohio. Wholesale and commission salesmen are invited. The sessions will not be just sales promotions meetings, but also symposiums on technical aspects of redwood.

CANADIAN ASSOCIATION JOIN TO PUSH WOOD . . . Canadian Wood Development Council has been established by 14 regional associations to carry out an expanded program of trade promotion and technical services. An extensive advertising and promotion program will be launched, backed by an enlarged technical field program. G. C. Edgett is executive director. Participating associations are Alberta Forest Products Association, British Columbia Lumber Manufacturers Association, British Columbia Lumber Wholesalers, Canadian Lumbermen's Association, Cariboo (PGE) Lumber Manufacturers Association, Consolidated Red Cedar Shingle Association, Interior Lumber Manufacturers Association, Maritime Lumber Bureau, Northern Interior Lumbermen's Association, Plywood Manufacturers Association of B. C., Quebec Lumber Manufacturers Association, Quebec Wholesale Lumber Association, Saskatchewan Timber Board and Wholesale Lumber Dealers Association. (See the editorial in this issue of THE LUMBERMAN on wood promotion.)

KLAMATH TIMBER REBIDDING CONSIDERED . . . If sufficient requests are received, the Bureau of Indian Affairs will readvertise the three tracts of timber on the Klamath Indian reservation in Oregon which were offered for sale on January 20, but unbid. The three units are valued at over $21 million. Principal species are ponderosa pine and lodgepole pine. One tract at the January 20 opening was sold to Crown Zellerbach Corp. The C-Z sale was largely lodgepole pine.

MOVABLE PARTITION PANEL . . . Simpson Logging Co., Shelton, Wash., has developed a line of panels for movable partitions system to be offered with birch, mahogany or tempered hardboard surfaces. Six thicknesses will range from 1⅜ to 2¾ inches. The panels are designed for use with numerous movable partition systems.

More INDUSTRY NEWS on Page 12

DON'T BURN IT!

. . . Sell it!

Scrap from your plant is too valuable to burn. Flake it and sell it as top-quality Bison Board — or use it in your own products . . . we can show you how.

The Bison System offers you proven performance, semi-automatic operation, low production cost, and *the world's finest flakeboard*. An installation can be tailored to your needs, with quality and production guaranteed. It is the *only* system that can produce high-quality flakeboard with 3500 M.O.R. when using 75% shavings.

Bison Board affords superior machining and finishing qualities — its progressively graduated particle structure concentrates fines to exterior for greater strength of thin sections, as well as protection against "telegraphing through" face veneers.

Every Bison System installation is test-run and proved before shipment, eliminating costly mistakes and start-ups. We can supply flakeboard samples *made from your own raw materials*, run through a standard production plant in advance of order and without obligation. See us for details.

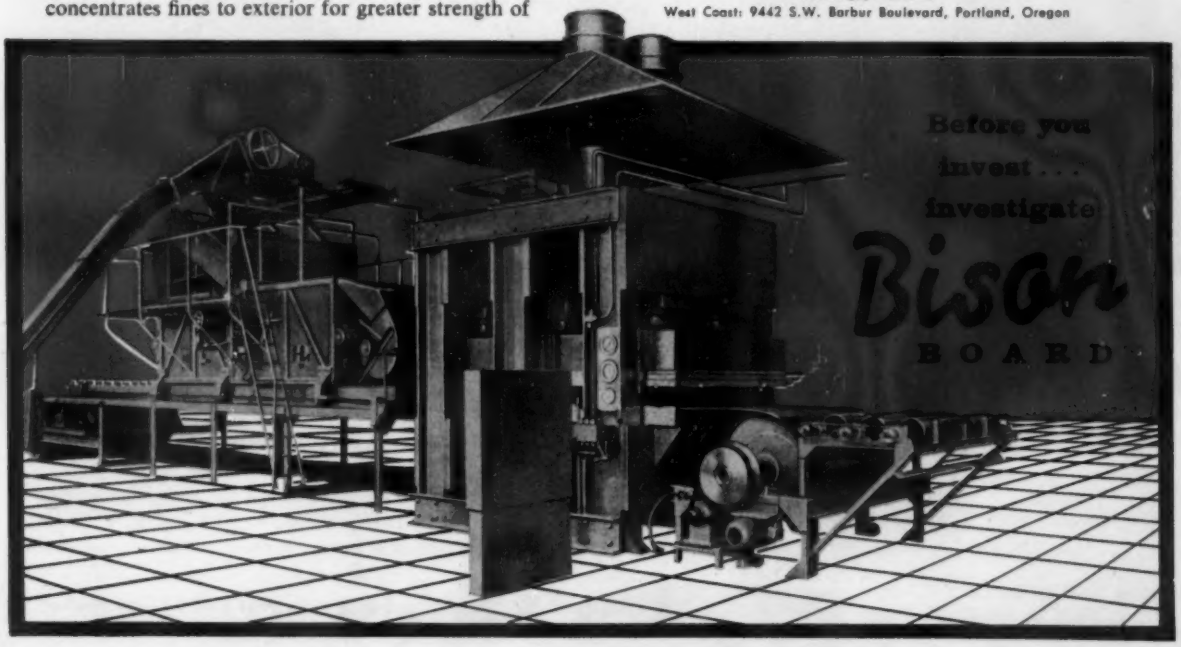
Sole American Distributor:

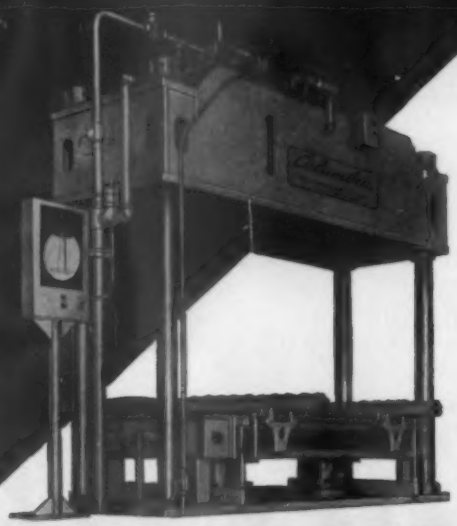
SODERHAMN MACHINE MANUFACTURING COMPANY

Soderhamn, Sweden, Since 1864

Talladega, Alabama

West Coast: 9442 S.W. Barbur Boulevard, Portland, Oregon





UPSTROKE

210-ton capacity press furnished with crown-mounted pumping unit as standard. Models over 210-ton capacity have floor-mounted pumping unit.

Columbia HYDRAULIC COLD LAMINATING PRESSES

for VENEER, PLYWOOD, PLASTIC, RUBBER, FIBREBOARD and PAPER PRODUCTION

DOWNSTROKE

fast press requires no special costly foundation, all downstroke models have crown-mounted pumping unit.

For profitable production, you can really "put the pressure on" with a Columbia Cold Laminating Press . . . known for reliable, low-cost operation.

TIME-PROVED Columbia HYDRAULIC PRESSES INDUSTRY-APPROVED

OUTSTANDING CONSTRUCTION AND OPERATING FEATURES

- Pressures to 200 p.s.i.
- Platens 30" x 60" and larger
- Maximum strength, minimum deflection
- Floor space-saving design
- Trouble-free hydraulic system
- Long-life packing, dependable pumps
- Labor and time-saving loading and unloading
- Convertible to high-frequency heating

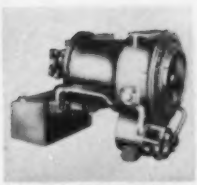
Whether your requirements are routine or special, Columbia Engineers can suggest equipment particularly suited to your needs . . . back up their recommendations with case history proof of Columbia superiority.

WRITE FOR BULLETIN CL-20
THE LODGE & SHIPLEY CO.,
3060 COLERAIN AVE., CINCINNATI 25, OHIO

Lodge & Shipley . . . your LODGE-ical choice in Hydraulic Presses, too!

PLANNED MASS-HANDLING

Your immediate attack against rising costs



IT'S A FACT: Gerlinger "Torqmatic" Drive safeguards engine from damaging shocks—eliminates "gearshift guess"—prevents stalling—and lessens driver fatigue.

YOU WILL MOVE SO MANY MORE TONS of materials—so much faster—that your savings multiply amazingly from the very first day you operate a big-capacity Gerlinger fork lift truck. By coordinating the mobile power of job-proved Gerlinger equipment with the handling of your heaviest loads, you profit immediately in time, space and dollars saved. Write for case studies that show you how companies similar to yours are reducing costs through more effective handling operations. TOWMOTOR CORPORATION, CLEVELAND 10, OHIO.

FORK LIFT TRUCKS, CARRIERS AND TRACTORS SINCE 1919

TOWMOTOR® THE ONE-MAN-GANG -GERLINGER*

*Gerlinger Carrier Co. is a subsidiary of Towmotor Corporation

DOW ADDING WESTERN PLANT . . . Dow Chemical Co. will build a phenol plant at Kalama, Wash., which will have a capacity of 36 million pounds a year when in production this summer.

At the Plant Front . . .

$8 MILLION B. C. OPERATION . . . Cyprus Mines Corp. through its newly formed subsidiary Kicking Horse Forest Products, Ltd., will spend an estimated $8 million to establish a major forest industry operation in the Revelstoke-Golden area of eastern British Columbia. It could become one of the largest operations in interior British Columbia. The firm recently acquired assets of Golden Lumber Co. at Golden and about 60,000 acres of land from Crown Zellerbach Canada. The company plans to install a series of portable sawmills to produce about 90 million board feet annually.

OREGON PLYWOOD NEARS PRODUCTION . . . The Oregon Plywood Corp. plywood plant at Albany, Ore., destroyed by fire in June, is being reconstructed and will be in production by mid-1960. Major pieces of equipment are being reconditioned.

$2.5 MILLION PLYWOOD EXPANSION . . . Western Plywood Co., Vancouver, B. C., will add an entirely new production line of two dryers, a lathe, press and barker plant at a cost of $2.5 million. The firm had earlier considered moving its operation to Deas Island at the mouth of the Fraser. The expansion work will allow integration of the plant with that of J. R. Murray division. The new plant, scheduled for completion in mid-1960, will up capacity to 650,000 square feet a day. Movement of the plant to the Deas Island area is still anticipated in 1965 or 1966.

RILCO PLANS WEST COAST PLANT . . . Rilco Laminated Products, Inc., St. Paul, Minn., will construct a plant at Cottage Grove, Ore., at a site adjacent to the Weyerhaeuser Co. operation. The new installation is expected to be producing glued laminated wood products by early this summer.

PARTICLE BOARD PRODUCTION NEAR . . . Wood Fiberboard Co., Albany, Ore., will be in production in May, producing a board from primary equipment supplied by Bahre Metal Works, Hamburg, Germany. The plant is a joint venture of Willamette Valley Lumber Co., Dallas and Santian Lumber Co., Sweet Home. These mills, and others in the area, will supply mill residues for the necessary chips. Daily capacity will be 125 tons.

HARDWOOD MILL DUE SHELTON, WASH. . . . L. R. Smith Hardwood Co., Longview, Wash., plans to establish a hardwood lumber mill at Shelton, Wash., which upon completion in a few years will represent an investment of $400,000. The initial unit, a two circular-headrig sawmill, is expected to be in operation in May cutting 40,000 feet a shift. Output will go to the Longview plant for finishing. The initial unit will also include a chipper with chips going to Longview Fiber at Longview. Alder and maple will come from the Olympic peninsula area. Later developments will include a remanufacturing plant, a planer and kilns.

MILL TO RESUME . . . The Columbia Lumber Co. sawmill in Longview, Wash., idle since 1958, has been leased by Portland Timber & Land Holding Co., Portland, Ore., and will resume operation. An output of 50,000 feet a day, two shifts, is planned. The new operators are considering installation of a scragg and gang mill to utilize small logs. Portland Timber & Land owns land and controls some timber contracts which will supply part of the mill's timber needs.

More INDUSTRY NEWS on Page 21

WORTH MORE BECAUSE THEY WORK MORE!

New Chevrolet tandems do bigger day's work!

With a tough new build that includes revolutionary Torsion-Spring Ride and the strongest rear suspension yet, Chevrolet's new tandems are equipped to do more profit-producing work per day than ever before. They're built to move mountainous payloads faster and more efficiently over rough routes, on or off the road.

Chevrolet's new M70 tandems – available on 157-, 175- and 193-inch wheelbases – are built to work more and earn more on big-tonnage runs, with extra load capacity and sensational new Torsion-Spring Ride. It's a ride that takes the rough edges off the biggest of bumps, easing the strain on driver, cargo and chassis components alike. You get a new kind of smooth-going *roadability* that pays off out on the job by assuring more ton miles of operation per day . . . higher safe speeds for extra trips and bigger profits.

Underlying this new roadability is Chevrolet's tough new torsion-spring independent front suspension system – available in high 7,000-lb. and 9,000-lb.* capacities. Here, rugged cast and forged steel control arms guide each front wheel precisely, and heavy-duty spherical joints and massive pivot bearings keep friction low. And for maximum off-the-road handling ease power steering is standard in all tandem models.

New Eaton-Hendrickson Rear Suspension

Back under the load is a totally new tandem rear suspension featuring two big 16,000-lb. axles, with rugged walking beams and torque arms to keep them tracking true. New, direct single-line drive – simple yet rugged in design – features a new inter-axle differential that divides the driving load equally at all times for less wear and long, trouble-free life. And you get the best kind of big-truck *power*, too, with Chevy's famous 230-h.p. Workmaster V8 provided as standard equipment. Your Chevrolet dealer can fill you in on all the facts. . . . Chevrolet Division of General Motors, Detroit 2, Mich. **Optional at extra cost.*

1960 CHEVROLET STURDI-BILT TRUCKS CHEVROLET

Rely on your AIM*...Thompson Lumber Company does...

Lumber bundling cuts unloading time 50%

THOMPSON LUMBER COMPANY, MINNEAPOLIS, MINNESOTA, worked with their Acme Idea Man to develop a system for bundling lumber orders with Acme Steel Strapping. The result: important time and money saving benefits for both themselves and their customers. (Idea No. U5-5)

Acme Idea Man Jim Kelly helps many progressive companies solve material handling problems.

Lumber orders, steel-strapped into tight, secure bundles cut yard handling time and reduce unloading time at the jobsite 50%. The time saved by this method has made possible up to 6 extra jobsite deliveries per day . . . an important advantage in providing better customer-service. Split roller-beds on trucks also allow delivery of two separate, steel-strapped orders on the same truck.

Customers like these steel-strapped lumber orders, too. They are easier to handle on the jobsite, improve housekeeping, and virtually eliminate pilferage.

***Rely on your Acme Idea Man's** experience in solving packaging and material handling problems. Write Dept. LBU-30 Acme Steel Company, 1025 Sixth Avenue South, Seattle 4, Washington. Also Portland, Oregon.

ACME STEEL **STEEL STRAPPING**

INDUSTRY TRENDS More TRENDS on page 22

CALENDAR OF COMING EVENTS

MARCH

Hardwood Dimension Manufacturers Association, March 2-4, St. Charles Hotel, New Orleans, La.

Western Pine Association, March 2-5, St. Francis Hotel, San Francisco, Calif.

Hardwood Plywood Institute, March 3-4, Biltmore Hotel, New York, N. Y.

Southern Forestry Conference, March 10-11, Robert Meyer Hotel, Jacksonville, Fla.

National Lumber Exporters Association, March 16, Roosevelt Hotel, New Orleans, La.

Redwood Region Logging Conference, March 17-18, Redwood Acres Fair Grounds, Eureka, Calif.

Southern Hardwood Producers, Inc., March 17-18, Roosevelt Hotel, New Orleans, La.

Intermountain Logging Conference, March 21-23, Davenport Hotel, Spokane, Wash.

Motor Vehicle Maintenance Conference, March 21-23, University of Washington, college of engineering, Seattle, Wn.

West Coast Lumbermen's Association, March 23-24, Multnomah Hotel, Portland, Ore.

APRIL

Southern Pine Association, April 4-6, Roosevelt Hotel, New Orleans, La.

Louisiana State University Forestry Symposium, April 7, L.S.U. Campus, Baton Rouge, La.

Canadian Institute of Timber Construction, April 10-14, Harrison Hot Springs Hotel, Harrison Hot Springs, B. C.

International Conference on Forest Tree Growth, April 11-13, University of Arizona, Tucson, Ariz.

Northwest Wood Products Clinic, April 12-13, Davenport Hotel, Spokane, Wash.

Northwest Hardwood Association, April 15-16, Eugene Hotel, Eugene, Ore.

American Institute of Timber Construction, April 18-20, Fairmont Hotel, San Francisco, Calif.

Northeastern Loggers Association, April 20-22, Hamilton Hotel, Utica, N. Y.

National-American Wholesale Lumber Association, April 21-23, The Greenbrier, White Sulphur Springs, W. Va.

Northeastern Lumber Manufacturers Association, April 25-26, Syracuse Hotel, Syracuse, N. Y.

Forest Products Safety Conference, April 28-30, Morck Hotel, Aberdeen, Wash.

Forest Products Research Society, northern California section, April 28-29, Sheraton-Palace Hotel, San Francisco, Calif.

California Redwood Association, regional meeting, April 29, Statler-Hilton Hotel, Dallas, Texas.

MAY

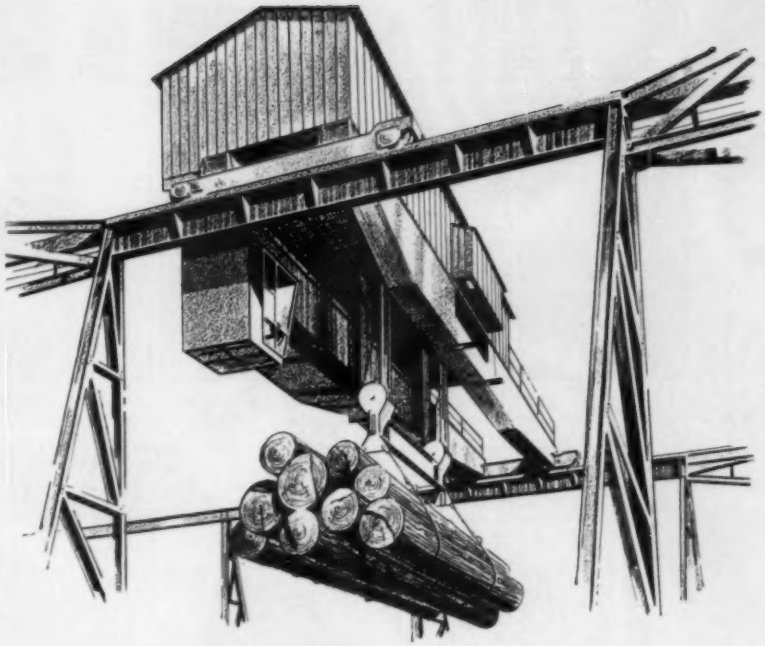
Quebec Lumber Manufacturers Association, May 1-3, Chateau Frontenac, Quebec, P. Q.

Olympic Logging Conference, May 5-6, Empress Hotel, Victoria, B. C.

Timber Products Manufacturers Association, May 18-19, Hayden Lake Golf Club, Hayden Lake, Idaho.

Northern Interior Lumbermen's Association, 25-27, McDonald Hotel, Prince George, B. C.

Hardboard Association, May 26-27, semi-annual meeting, Sir Francis Drake Hotel, San Francisco, Calif.



Log-handling is cheaper by the load

This 60-foot span crane was "job-engineered" by EDERER for service at a paper mill. It moves logs from the pond or unloads from trucks or cars to the log deck . . . handles full loads at one lift—up to the crane's 50-ton capacity. This faster, smoother log-handling saves time and money.

The crane has double drum fixed hoist and spreader bar. The bridge moves from pond, over tracks and to log deck. Hoist and controls are completely housed for service in any kind of weather.

Inquire about our complete line of light duty cranes from 3- to 20-ton capacity.

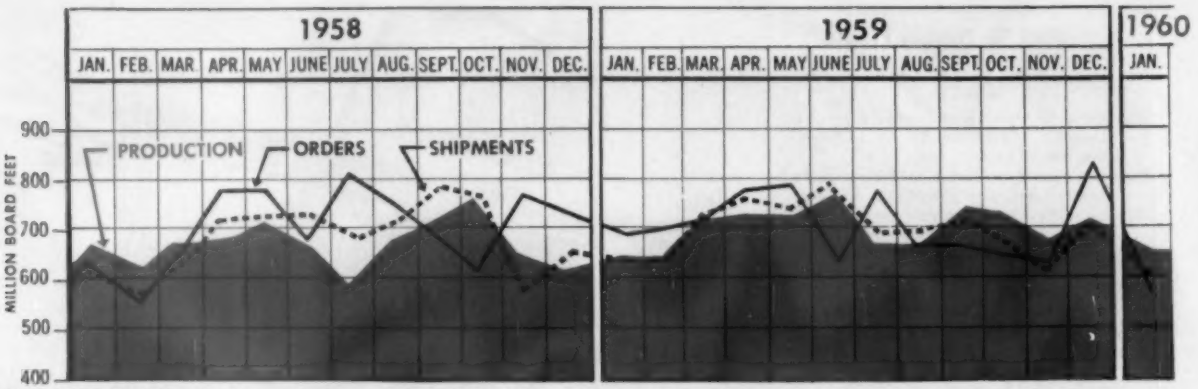
EDERER "job-engineers" equipment for the forest products industries for many such specialized uses. Why not discuss YOUR special job requirements with an EDERER engineer?

EDERER Cranes

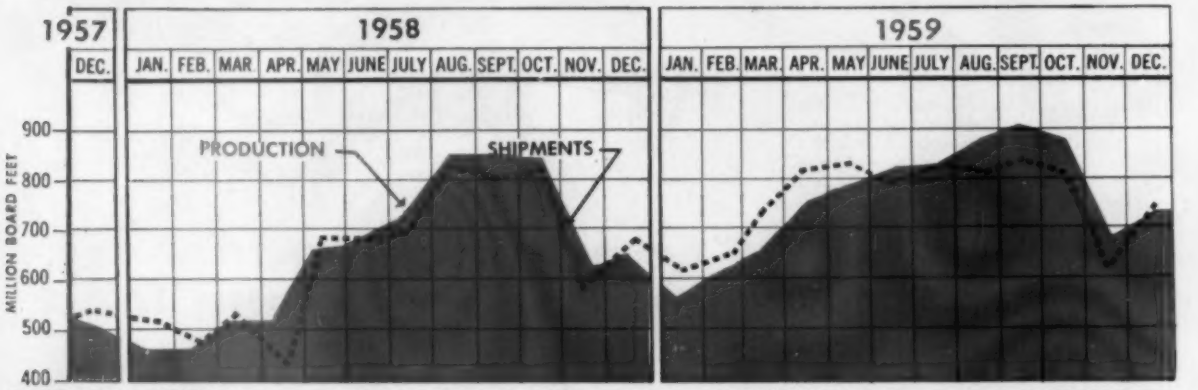
344C59

EDERER ENGINEERING COMPANY
2933 FIRST AVENUE SOUTH • SEATTLE 4, WASHINGTON
EXPORT DIVISION: 301 Clay Street, San Francisco 11, California

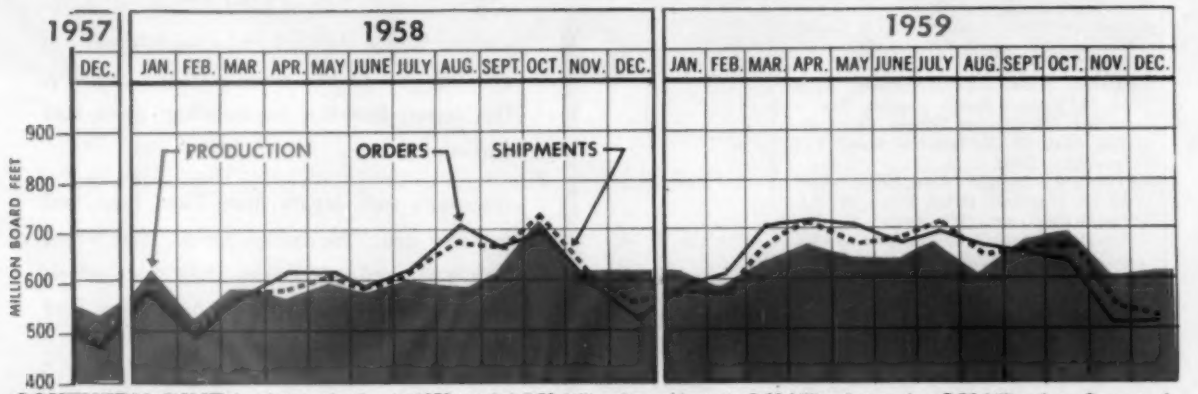
Since 1901 — "JOB-ENGINEERING" CRANES AND HEAVY EQUIPMENT



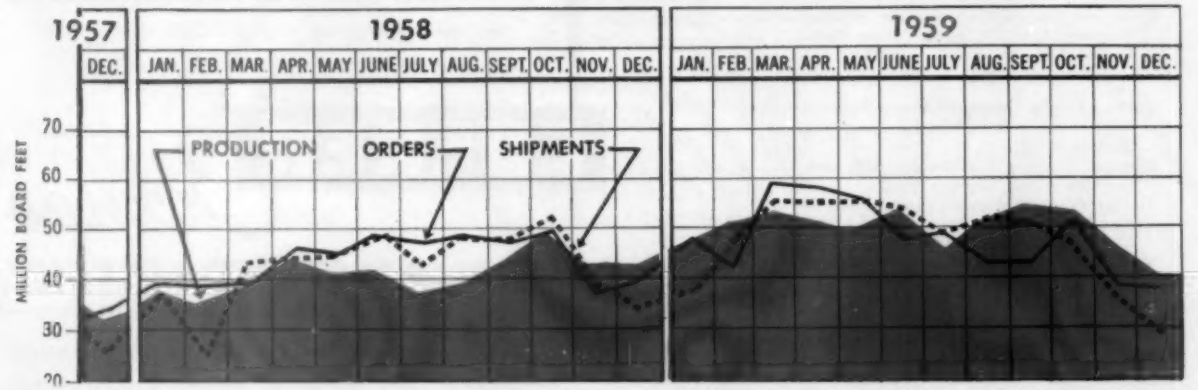
DOUGLAS FIR Lumber production in January totaled 650 million feet. Orders totaled 566 million feet, shipments 603 million feet. Unfilled orders at the end of January totaled 666 million feet. Inventory at the end of January is one billion feet.



WESTERN PINE Lumber production in 1959 totaled 9.4 billion feet, shipments 9.35 billion feet. Gross stocks at the end of the year totaled 2.05 billion feet. Production is up 11.4% over 1958, shipments are up 10.6%, stocks up 2.2%.



SOUTHERN PINE Lumber production in 1959 totaled 7.78 billion feet, shipments 7.66 billion feet, orders 7.56 billion feet. Gross stocks at the end of the year totaled 1.8 billion feet. Unfilled orders are estimated at 179 million feet.



REDWOOD Lumber production in 1959 totaled 604 million feet, shipments 561 million feet, orders 564 million feet. Orders on hand at the end of the year total 63 million feet. Stocks on hand totaled 389 million feet.

Make sure of the service... before you buy!

Costs start climbing the minute a fork truck goes out of service. The national average for truck downtime is conservatively estimated to be $16.48 per hour. An important reason why fast, qualified parts service is essential.

It's why Clark dealers offer you the largest inventory of parts in the industry. It's why Clark maintains a 16,000 mile private wire communication system. It's why Clark has built a multi-million dollar parts warehouse near Chicago's Midway Airport.

Everything in the Clark service system is geared to speed. Vital materials handling equipment must be back on the job *fast!* To assure you of fast service Clark provides you with over 117 service facilities throughout the nation . . . each carrying a complete parts inventory. To back this up, the Clark Central Parts Depot maintains an inventory of over 5 million parts . . . emergency parts that can be air-shipped to any part of the country in a matter of hours. *Only* Clark offers you this service.

Want to see how it's done? A colorful brochure and a film strip describing this service system are available through your local Clark dealer. You'll find him listed in the yellow pages under "Trucks, Industrial." Or, if you prefer, write direct to: Clark Parts Service, Clark Equipment Company, Battle Creek, Michigan.

CLARK® EQUIPMENT

Printed in U. S. A.

selection chart

Compare these most popular Moline Mill Chains. Here is information in condensed form listing mill chains and their available attachments . . . range of sizes . . . application data . . . and capacity range. It's a selected part of the new, recently published 36-page Moline Chain Manual and Design Engineers' Handbook which is now offered free to chain buyers. Write today for your copy.

FOR TRIPLE-TESTED MOLINE MILL CHAINS*

	CHAIN TYPE & NUMBER	APPLICATION AND INSTALLATION	ATTACHMENTS	PITCH RANGE IN INCHES	ULTIMATE STRENGTH (IN LBS.)
	H-Type Mill H-60, H-62, H-74, H-75, H-78, H-82, H-85, H-87, H-95, H-124	Designed primarily for heavy drives and transfer conveyors in saw mills, and pulp and paper industry but widely used throughout industry. Strong and rugged, provided with wearing shoes for stiffness and long service life.	A-1-12 F-4 G-1-6-19-48 H-1-2 K-1-2 M-3 R & L RR	1.654 to 4.000	7,000 to 30,000
	Refuse Chain H-97, H-98, H-102, H-104, H-110, H-112, H-113, H-116, H-117, H-118, H-120, H-122, H-480	Widely used in troughs for dragging sawdust and other waste material. Face designed to push material along without over-riding. Larger sizes capable of moving large capacities at moderate speeds.	C-1-3 RR Wing	5.00 to 8.00	20,000 to 40,000
	Transfer Chain C-55-A, C-55-B, H-78-A, H-78-B, H-130, H-131, H-138	Used in parallel strands for carrying boxes, crates, lumber and heavy concentrated loads. Available in both detachable and riveted construction and in "peaked" and "flat roof" designs; intended for operation in troughs.		1.631 to 4.000	9,000 to 23,000
	Combination Chains—C-55, C-77, C-102-B, C-102½, C-110, C-110-C, C-111, C-111-C, C-131, C-131-C, C-132, C-132-C, PW-132, C-188, MW-188	Very rugged and serviceable for use in bucket transfer and many other types of elevators and conveyors. Widely used in pulp and paper, lumber and other industries. Pin and cotter assembly or riveted construction.	C-3-132 RF-12 F-2 G-6-19 K-1-2-3 LL-25	1.631 to 6.050	9,000 to 50,000
	Combination Type Mill Chain 6104, 6110, 8116, 8480	Moline combination type mill chain is designed to replace regular H-type conveyor chains because of its greater ultimate strength in corresponding sizes. Has larger diameter rivet, better bearing areas between pin and link, rivets and sidebars of high carbon steel.		6.00 to 8.00	42,000 to 56,000
	Moline "Standard" or "Special" Flights Pangborn Type	Attached to Moline Long Link Chain, these flights provide an economical and efficient method of handling saw and pulp mill refuse. Moline design permits clean scraping action with greater capacity. Standard or high face types available for trough operation.		Standard: Overall Length—12-16" Height—2¾-5¼" Special: Overall Length—12-32" Height—2¾-7"	
	Moline Log Chains Light Duty Heavy Duty	Especially designed for heavy duty service hauling logs from pond to deck. Loop links with several sizes available designed for precision fit in chairs. Extra heavy construction for long life and service.		Light Duty: Overall Width—15" Tooth Height—4⅞" Heavy Duty: Overall Width—15" Tooth Height—6-7"	

Write today for your free copy of the new Moline Conveyor Chain Manual and Design Engineers' Handbook.

60 YEARS IN LUMBER SERVICE

*Call your nearby Moline dealer today! Design service available for special chains or unusual applications.

Moline Chains

MOLINE MALLEABLE IRON CO., St. Charles, Illinois

Specializing in the manufacture of chains

ALEMITE
BARREL-TO-BEARING
LUBRICATION

the "moving force" of production!

More and more, cost-conscious plant men are recognizing modern lubrication as an important "production tool." No longer do they see it as a simple maintenance problem.

With the years-ahead Alemite Barrel-to-Bearing Lubrication method, today's leading manufacturers are stepping up production . . . reducing downtime . . . extending machine life.

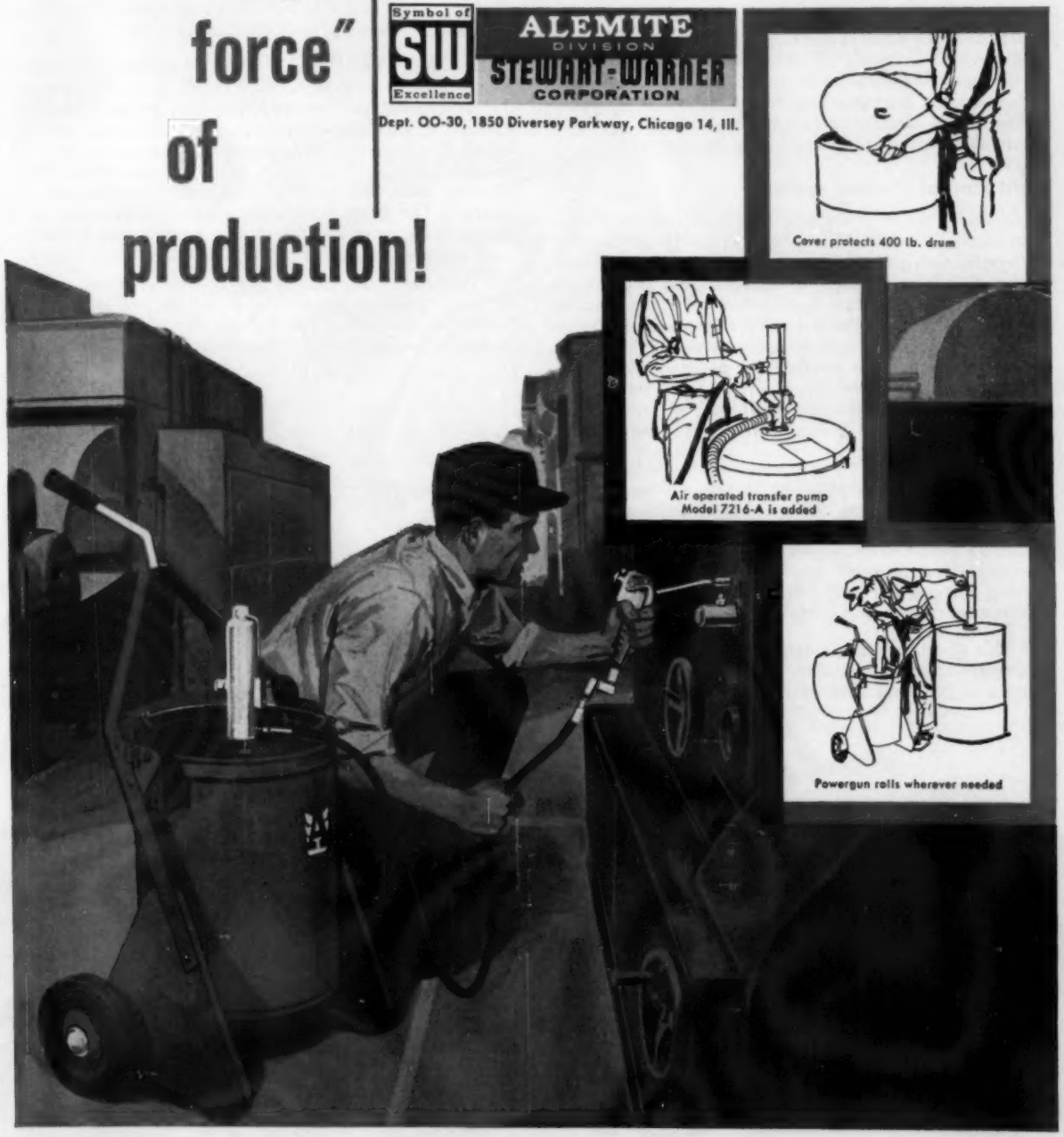
Included in a complete Alemite barrel-to-bearing lubrication method can be electric, air or hand-operated equipment. It will more than meet every need for high-pressure lubrication, filling hydraulic systems, servicing oil reservoirs, lubricating gear housings, and refilling grease guns.

Write for free Alemite catalog today!

Symbol of SW Excellence

ALEMITE
DIVISION
STEWART-WARNER
CORPORATION

Dept. OO-30, 1850 Diversey Parkway, Chicago 14, Ill.



Cover protects 400 lb. drum

Air operated transfer pump Model 7216-A is added

Powergun rolls wherever needed

engine power
BY CATERPILLAR

SURE STARTING—one of the things to consider when selecting diesel power for sawmills and logging equipment

Fast starts—even when temperatures tumble

One of the most important considerations in choosing diesel power for sawmill and logging equipment is dependable starting. You can't afford to be hampered by a diesel engine that balks when temperatures fall. With Caterpillar Diesel Engines, you can select the starting system—gasoline engine, direct electric or air motor—that will give you dependable starting under conditions in your area.

What kind of starting system?

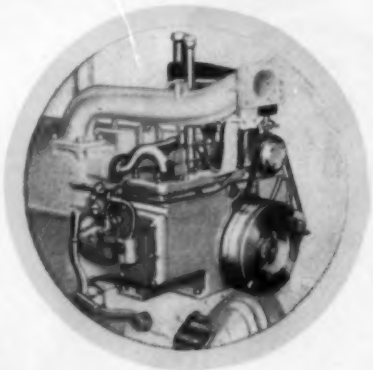
Gasoline. Of the three systems, the gasoline engine is most often used in sawmill and logging. On Cat Diesel Engines, this system uses a Cat-built, engine-mounted, two-cylinder engine. It is hand cranked or electric started. The engine has its own gasoline fuel tank and clutch. The gasoline starting engine's popularity in cold climates is due to its ease of starting. Because its cooling system and the diesel's are interconnected, the gasoline engine gradually warms the jacketed water of the diesel. The gasoline starting engine can crank the diesel as long as needed until combustion temperature and correct oil pressure are obtained.

Electric 24 or 32 volt starters are available for all Caterpillar Diesel Engines. Engine size and application determine which is used. Direct electric starting is compact, convenient and dependable. The electric system can be used to crank the engine for periods of 30 seconds with two-minute rest intervals between periods. Cat Electric Starting Systems are available with attachments, such as charging generators, and starting aids.

Air This system would be used where a plentiful supply of compressed air is available. The air starting motor develops a high torque when operating 90-150 PSI air. The air system consists of an air starting motor, oiler for motor, Bendix Drive, and starting valve and pressure regulator. Optional attachments meet application needs.

Your Caterpillar Diesel Engine Specialist can recommend the starting system you'll need. As far as users go, here's what A. W. Fetscher, President, Fetscher Logging Company, Missoula, Montana, reports about the starting of his Cat Engines: "We like the starting unit on the Cat Engine, particularly in cold weather, compared with other starting units. We've been using Caterpillar Engines 12 years." The company's Caterpillar D318-powered heel boom loader is shown below in a swamp area workable only in freezing weather.

Your Caterpillar Dealer Engine Specialist can answer all your questions concerning power as well as any you might have on getting rid of tough starting. Call him—or write for the free booklet, "More Board Feet . . . Less Cost."



CATERPILLAR

Engine Division, Caterpillar Tractor Co., Peoria, Illinois, U. S. A.

Caterpillar and Cat are Registered Trademarks of Caterpillar Tractor Co.

MILL TO BE REPLACED . . . The Clearwater Lumber Co. sawmill at Spalding, Ida., destroyed by fire in January, will be rebuilt says James K. Johnson, vice-president of the company. The fire which leveled the plant spared the planer, docks and kilns.

NEW GEORGIA MILL . . . Longleaf Lumber Co., Inc., is ready to start production at a new $300,000 sawmill located just west of Richland, Ga. Benson M. Jones, operator of a wholesale lumber firm in Atlanta and chief sponsor of the mill, says the plant will have a capacity of 60,000 feet a day. Facilities includes a barker and chipper.

HARDBOARD PRODUCTION PLANNED . . . International Paper Co., Long-Bell division says it will expand the specialty board pilot plant at Longview, Wash., to commercial production. Daily production is expected to jump to 50 to 60 tons in a 3-shift operation. Company officials say flake production capacity will be increased by the use of new German machines now on order. The pilot plant has been operating since 1950. It is similar to units operating in Germany and Switzerland.

OREGON PLYWOOD PLANT PLANNED . . . Rosboro Lumber plans to build a plywood mill to be integrated with its existing lumber mill in Springfield, Ore. The plant is expected to be producing in April, 1960, with a capacity of about 4 million square feet, ⅜-inch basis, per month. Most of the output will be sanded.

CHIPPING PLANT OPERATING . . . Souter Lumber Co., Montezuma, Ga., has started operation of a chipping and debarking plant. Souter operates a sawmill and concentration yard.

CHARCOAL PLANT DUE MISSISSIPPI . . . A $250,000 charcoal plant is being built east of Lexington, Miss., by Herbert Hyman, business man of Holmes County. Cull logs, tops, limbs and storm-damaged trees will supply the operation. Production of 30 tons a day is planned.

Personalities . . .

NEW OFFICERS AT WELSH . . . James R. Welsh, organizer and former president of Welsh Plywood Corp., Memphis, Tenn., has been named chairman of the board. E. L. Bruce, Jr., president of E. L. Bruce Co., becomes president of Welsh Plywood. J. B. Wiseman is new executive vice-president.

HOPKINS PROMOTED . . . M. L. Hopkins has been named vice-president and general manager of Willamette Plywood Corp., Aumsville, Ore. He succeeds Harold Leevers who has resigned. Hopkins formerly headed the plywood operation of the firm.

NPDA EXPANDS STAFF . . . Joseph O. Epler has been added to the staff of the National Plywood Distributors Association to serve as assistant to managing director Mahlon Munson. Epler is widely known in Kiwanis International and is immediate past-governor, Pacific Northwest District.

NEW CALUMET & HECLA EXECUTIVE . . . D. W. Blend has been elected a director and vice-president, operation, of Calumet & Hecla, Inc. His management responsibilities will include the operating facilities of the Good Lumber division, with properties in northern Wisconsin and Michigan's upper peninsula.

WESTERN MANAGER NAMED . . . Robert L. Brosy has been promoted to manager of the western division of Timber Structures, Inc. He will headquarter in Portland, Ore., and be in charge of sales in the 13 western states. Brosby has been manager of the firm's Seattle, Wash., office since 1951.

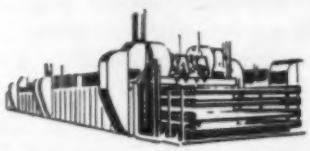
Find out how
RADER
CUTS CONVEYOR
COSTS

Write to: Rader Pneumatics, Inc.
1739 N. E. 42nd Ave., Portland 13, Oregon

RADER PNEUMATICS Inc.

COE
VENEER
MACHINERY

LATHES
CLIPPERS
DRYERS
KNIFE
GRINDERS



The COE MFG. Co.
Painesville, Ohio

NEWMAN
M-68
DIRECT MOTOR DRIVE

PLANER & MATCHER
A six roll ALL ELECTRIC
medium feed machine

Feeds to 175 feet per minute. Feed gears heat treated and interchangeable. The M-68 DMD is extremely close coupled to insure ACCURATE SIZING WITH SUPERIOR FINISH

HORSEPOWER
Top Cylinder: 40 — Bottom Cylinder: 20 — Profiler: 15
Side Heads: 15 and 20 — Feed: 7½

NEWMAN MACHINE CO. INC.
Greensboro North Carolina U.S.A.

INDUSTRY TRENDS

PLYWOOD DISTRIBUTORS SEE GAINS. The nation's plywood distributors expect their business to be better in the first six months of 1960 than it was in the last half of 1959. This was disclosed in a survey by THE LUMBERMAN.

The question was answered by 451 distributors, which makes this a highly representative cross section of the expectations of the warehouse jobbers throughout the country who sell plywood.

The distributors were asked whether they expect their business in the first half to be up, down, or the same as in the last half of 1959. The table below shows in percentages how they answered the question, for the nation as a whole, and for four broad regions.

	Above 1959	The Same	Below 1959
Northeast	57.5%	25.7%	16.8%
North Central	51.8%	37.5%	10.7%
South	55.2%	34.2%	10.6%
West	51.4%	32.0%	16.6%
The Nation	53.8%	33.2%	13.0%

The analysis shows that 87% of those answering expect their business in the first half to be as good or better than the last half of 1959. By regions, percentages expecting as good or better business:

Northeast	83.2%	The South	89.4%
North Central	89.3%	The West	83.4%

Among states with the largest number of distributors reporting, California was least optimistic. Only 75% expect business to be as good or better than in 1959. Michigan chalked up 100%; Texas, 93.3%; New York, 80.7%, and Pennsylvania, 82.3%.

The Northeast includes: Conn., Maine, Mass., N. H., N. J., N. Y., Pa., R. I., Vt. North Central: Ill., Ind., Iowa, Kans., Mich., Minn., Mo., Nebr., N. Dak., Ohio, S. Dak., Wis.

The South: Ala., Ark., Del., D. C., Fla., Ga., Ky., La., Md., Miss., N. C., Okla., S. C., Tenn., Tex., Va., W. Va.

The West: Ariz., Calif., Colo., Ida., Mont., Nev., N. Mex., Ore., Utah, Wash., Wyo.

DFPA TOTALS UP 1959. The Douglas Fir Plywood Association says production of the fir plywood industry in 1959 totaled 7.75 billion square feet, ⅜-inch basis. (Other estimates: THE LUMBERMAN in its 29th annual plywood review 7.702 billion square feet; Business and Defense Services Administration 7.5 billion square feet).

DFPA breaks down its figure to 4.474 billion square feet sanded, 3.278 billion square feet unsanded.

New orders in 1959 totaled 7.648 billion square feet.

PACIFIC COAST WATER CARGOS OFF. The Pacific Lumber Inspection Bureau says 2.867 billion board feet of lumber was shipped from western North America in 1959, 3.6% less than in 1958.

By states: Washington 661 million feet, up 6%; Oregon 950 million feet, down 1.3%; California 58 million feet, down 22%.

British Columbia, 1.198 billion feet, down 9%.

WOODEN BOX BUSINESS GOOD. Box shook production in the western states in 1959 reached 349 million feet, 36 million better than 1958. And the outlook for 1960, expressed at the annual meeting of the Western Wooden Box Association, is for still better business.

Ben H. Chaney, in charge of maintenance, Cheney Port Mill, Inc., Tacoma, Washington.

"UNOBA...can save a lot of grief"

"For general mill use you just can't beat the performance of Union Oil lubricants.

"Take these bearings under our mill—water is constantly flooding them, yet a shot of Unoba F-1 Grease twice a week gives efficient protection. I've replaced one of these bearings in the past five years. Union's Marok is the lubricant we use on the chains and that oil really stays with 'em.

"I use Unoba F-1 throughout the mill as it not only protects bearings from water, but also from heat and high RPMs on edgers and planers. Believe me, you can save a lot of grief by using one good grease...Unoba."

Mr. Chaney is right! Using Unoba Grease in your mill *can* save you a lot of grief. That's because Unoba F-1 is exclusively formulated of high V.I. 100% pure paraffin base oils, barium-lithium soap bases, plus the most effective oxidation inhibitors to resist severe heat, moisture, shock and corrosion conditions. Try it and be convinced.

UNION OIL COMPANY OF CALIFORNIA 76

UNION OIL CENTER, LOS ANGELES 17, CALIFORNIA

Which Type ADJUSTABLE SPEED DRIVE CONTROL Do You Need? SQUARE D BUILDS BOTH!

Typical application of Adjustable Voltage Drive to large metal spinning lathe in operation at Phoenix Products Company, Milwaukee

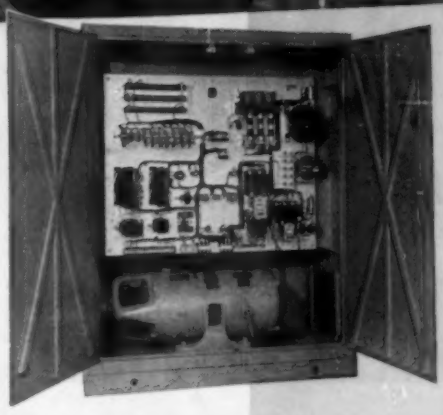
ADJUSTABLE VOLTAGE CONTROL FOR M-G SETS...Through 400 HP

Simplified Circuits with rugged heavy-duty control components.

Easy Maintenance because standard magnetic starters, relays and timers are used in combination with static regulators.

3 Types Available • (*1*) magnetic amplifier exciters (*2*) dry disc exciters (*3*) rotating exciters.

Easy to Adjust because centralized "tune-up" elements are accessible and readily identified.



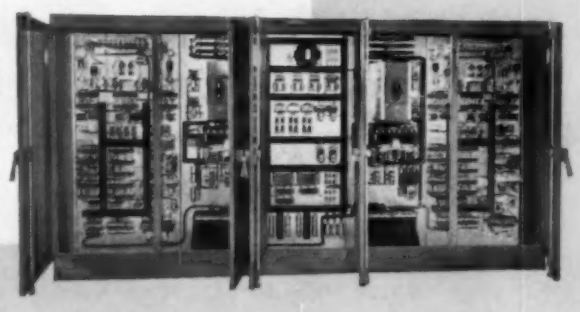
FULLY ELECTRONIC with SIMPLIFIED FAIL-SAFE CIRCUITS THROUGHOUT

Simplified Circuits use less tubes. Fail-safe circuits prevent motor runaways.

Easy Maintenance because sub-panels can be quickly removed and replaced. "Brain" panel senses varying conditions.

Easy to Adjust with only a few, very accessible potentiometers.

Both types are available in two kinds of construction—standard package and custom-built.

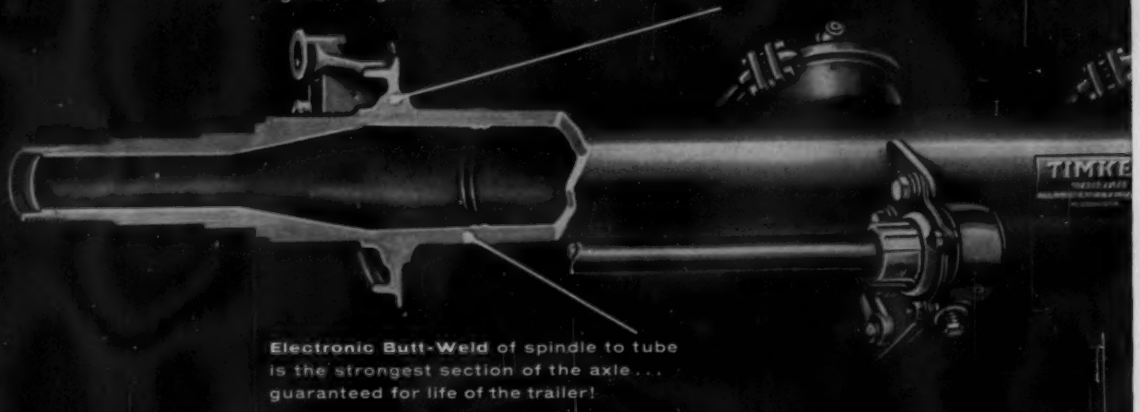


Write for descriptive literature. Address Square D Company, 4335 Valley Blvd., Los Angeles 32, California

SQUARE D COMPANY

wherever electricity is distributed and controlled

TIMKEN-DETROIT TK-500 SERIES TRAILER AXLES ARE STILL THE LIGHTEST, SAFEST, MOST RUGGED YOU CAN BUY!


Rugged One-Piece Forged Steel Brake Spider is electronically welded to axle for lighter weight and better brake performance.
Electronic Butt-Weld of spindle to tube is the strongest section of the axle . . . guaranteed for life of the trailer!

often imitated... but never equaled!

Every TK-500 Series Trailer Axle is "torture-tested" for safety.

Exclusive alloy steel spindles are upset forged and hot-pierced for greater strength at less weight.

One-piece forged alloy steel brake spider is practically indestructible . . . gives rigid brake support and never needs replacing.

Huge Rockwell designed welding machines electronically butt-weld the spindles to the seamless tubular section, making this the strongest section of the axle.

Only Rockwell-Standard has the facilities to perform these operations. Backed by 50 years of axle pioneering and billions of miles of trouble-free service, Rockwell-Standard is the accepted standard for the industry.

For maximum safety, less maintenance and more payload, specify and insist upon the Timken-Detroit TK-500 . . . *there is no equal.*

Another Product of... **ROCKWELL-STANDARD CORPORATION**

ROCKWELL R STANDARD

Transmission and Axle Division, Detroit 32, Michigan

Signode M2 power strapping machine with PFA attachment. Operator makes momentary check of alignment of paper automatically fed under strapping from roll in foreground.

Millwork bundles are steel strapped and paper-protected new Signode way

KD sash and frames are steel strapped with edges paper-protected at an average production rate of 1,000 to 1,100 bundles per day. Strapping is done on a Signode M2 power strapping machine with paper feeder attachment. The chipboard paper is automatically fed under the strap. It permits a tight, secure bundle, yet eliminates the slight edge damage done by strap without paper ...produces an economical "perfect" bundle not obtainable any other way.

Cost of the 1¼" x .032" chipboard strip is 0.09 cents per foot—about ¼ cent per bundle. Strapping with the chipboard is about 15% slower than without it...a small premium to pay for almost absolute protection to edges—and resulting customer satisfaction.

The paper feeder attachment can be added to any Signode Model M2 Power Strapping Machine not equipped with an enclosed chute...affords protection to edges and surface finishes of millwork and other wood and metal products and parts.

For further information, call the Signode man near you, or write for your free copy of Leaflet SPD 182.

SIGNODE

First in steel strapping

SIGNODE STEEL STRAPPING CO.

2616 N. Western Avenue, Chicago 47, Illinois

Los Angeles 1, 659 East Gage Ave. • Pittsburg, Calif., Loveridge Road • Eugene, 1955 Todd
Portland, 1519 N. W. Irving St. • Seattle 4, 1750 Occidental Ave. • Spokane, 617 Paulsen Bldg.
Olympia, 1024 Eskridge Blvd. • Canadian Steel Strapping Co., Ltd., Vancouver, B.C.

TRIAL SAMPLES

of World-Famous WHITMORE'S LUBRICANTS Now in Spray-On-Cans and Cartridges!

WHITMORE'S WIRE ROPE SPRAY INCREASES WIRE ROPE LIFE UP TO 300%

Exclusive formulas for lubricating and protecting wire rope, chain, springs. Penetrates to the core of wire rope minimizing internal friction and increasing usable life up to 300%—special protective qualities absolutely eliminate internal and external corrosion—non-gumming qualities reduce "carry-back"—packaged in handy 16 oz. aerosol spray-on containers or in bulk containers—send for a free trial sample.

WHITMORE'S LIQUID GEAR COMPOSITIONS ELIMINATE METAL TO METAL CONTACT

For open gears, dipper sticks, cams and sliding surfaces—exclusive formulas eliminate metal-to-metal contact, keep wear on the lubricant not the metal—no breakdown even after prolonged use under water—available for every climatic condition—packaged in handy 16-oz. aerosol spray-on containers or in bulk containers—send for a free trial sample.

WHITMORE'S ANTI-FRICTION COMPOSITIONS HAVE NO MELTING OR DROPPING POINT

Packaged in 14½ oz. cartridges for handy application with lever-type cartridge guns for constant protection to roller, ball, sleeve bearings and sliding surfaces in "hot" bearing applications or in areas with high ambient heat. Exclusive formulas have no melting or dropping point; moisture resistant; will not wash out; exceptional metal adherence properties; temperature reducing qualities; extreme pressure values. Available in two grades. Whitmore's Anti-Friction Composition No. 1 (light density), recommended for high speed, high temperature applications. Anti-Friction Composition No. 2 (heavier density), for low speed high temperature applications or loosely-fitted bearings. Specify No. when requesting free trial sample.

65 YEARS OF LEADERSHIP LUBRICATING THE FOLLOWING:

- Open Gears, Dipper Sticks, Cams
- Enclosed Gear Cases
- Wire Rope and Cable
- Hydraulic Units, Torque Converters
- Roller, Ball, and Sleeve Bearings
- Speed Reducers

The Whitmore Mfg. Co.
LUBRICATING ENGINEERS
CLEVELAND 4, OHIO, U.S.A.
PHONE VUlcan 3-7272

The Whitmore Mfg. Co., Cleveland 4, Ohio
Please send me free TRIAL SAMPLES of the following:

- ☐ WIRE ROPE SPRAY
- ☐ LIQUID GEAR COMPOSITION
- ☐ ANTI-FRICTION COMPOSITION NO. 1
- ☐ ANTI-FRICTION COMPOSITION NO. 2

NAME_____ TITLE_____
COMPANY_____
ADDRESS_____

HYSTER

If you need the extra traction of 4-wheel drive –

HYSTER® has it!

First 4-wheel drive on conventional lift trucks. New Hyster Challenger 150-200 series handles 7½ to 10 tons over rough muddy ground.

Climbs grades 47% steeper than two-wheel drive.

Choice of oil clutch — torque converter — standard transmission.

Gasoline — LP gas — diesel power.

Call your Hyster dealer or write for literature.

INDUSTRIAL TRUCK DIVISION — Lift trucks, mobile cranes, straddle carriers
TRACTOR EQUIPMENT DIVISION — Construction and logging equipment
MARTIN TRAILER DIVISION — Heavy machinery hauling trailers
INTERNATIONAL DIVISION — Overseas manufacturing, sales and service
Factories: Portland, Oregon (Home Office) • Danville, Ill. • Peoria, Ill. • Kewanee, Ill. • Nijmegen, The Netherlands • Glasgow, Scotland • Sao Paulo, Brazil • Sydney, Australia (Licensee)

HYSTER COMPANY
INDUSTRIAL TRUCK DIVISION
P. O. Box 847 • Danville, Illinois

Permatox 10-S plus Bazide

controls both Enzymatic Brown Stain *and* Fungus Blue Stain *in white and sugar pine*

Now you can stop costly brown stain as well as blue stain in white and sugar pine with a single pre-mixed chemical product from Chapman.

New Chapman Permatox 10-S plus Bazide is a formulation developed through years of research into the cause and means of preventing the chocolate colored brown stain. It contains sodium azide with buffering agents, which effectively prevent this cause of lumber degrade, and sodium pentachlorophenate for fungus blue stain and mold control.

Effective combination—Effectiveness of the sodium azide portion of the product is increased by combining it with the sap stain control chemical. Thus, Permatox 10-S plus Bazide gives much cleaner lumber than does Bazide when used alone.

Possible savings in prevention of degrade are in the range of $15 to $20 per M when brown stain is controlled. This is in addition to the savings achieved when blue fungus stain and mold are also eliminated.

Easily applied—Permatox 10-S plus Bazide is easy to use. The convenient 10-lb. bag is mixed with water to make 100 gallons of solution. Application is by passing the freshly cut lumber through the green chain dip tank.

Start using Permatox 10-S plus Bazide now to get top value for your white and sugar pine lumber. Mail the coupon for complete information.

CHAPMAN®

CHAPMAN CHEMICAL COMPANY

Leading manufacturer of wood preservatives

Memphis 1, Tennessee

PALO ALTO, CAL., PORTLAND, ORE.,
MINNEAPOLIS, MINN., CHARLOTTE, N. C.

MAIL FOR FACTS

Chapman Chemical Company
P. O. Box 138, Memphis 1, Tenn.

Please send complete information on use of Permatox 10-S plus Bazide.

Name_____

Company_____

Address_____

INSTALLATION AT THREE RIVERS PLYWOOD AND TIMBER CO. DARRINGTON, WASH.

GREENLEE MACHINERY & TOOLS

PRECISION

Pays Off with Higher Quality

Greenlee No. 545 Skinner Saw and No. 545 Cut-Off Saw with Automatic Transfer

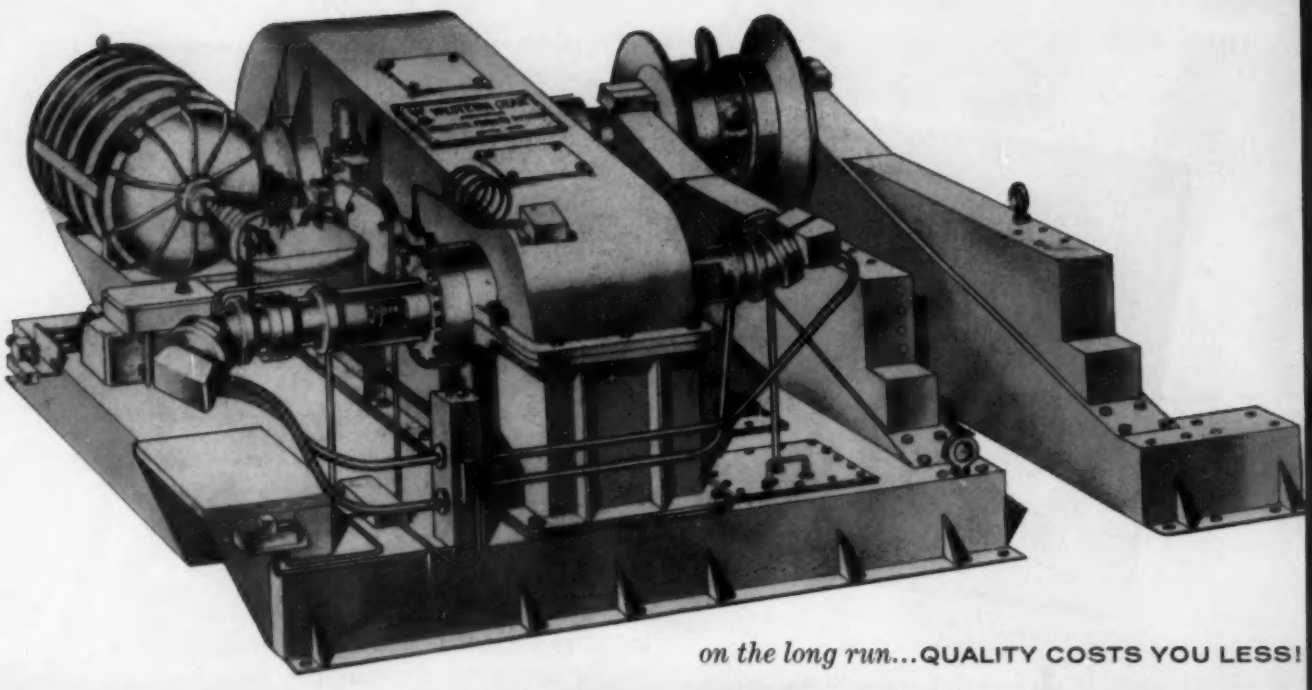
Greenlee No. 545 Skinner and Cut-Off Saws have a well-known ability to cut panels that are perfectly square with smooth, true edges. Quality production that gives you a better product . . . a better price . . . more satisfied customers. Such outstanding performance has won the respect of management in plant after plant. In addition to sizing, Greenlee machines can be arranged for specialty work . . . splitting . . . scarfing . . . multiple grooving. It is time now to call in your Greenlee representative and get all the facts. Write today.

Put a Profit in Your Woodworking With Greenlee Machines

WOODWORKING MACHINERY MANUFACTURERS' ASSOCIATION WMMA

GREENLEE BROS. & CO.

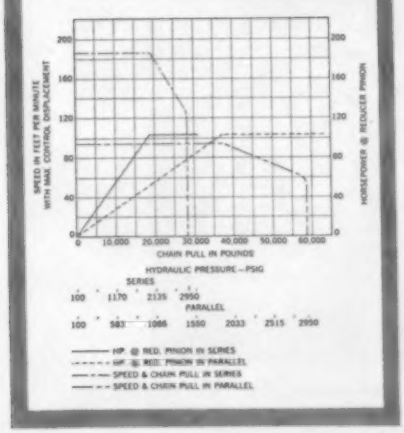
1894 TWENTY-FIRST AVE.
ROCKFORD, ILL.



*on the long run...*QUALITY COSTS YOU LESS!

ANOTHER WESTERN GEAR "FIRST"...ELECTRO-HYDRAULIC LOG HAUL DEVELOPED FOR ALASKA LUMBER & PULP COMPANY

The electro-hydraulic log haul pictured here, unique among the 175 gear drives supplied for the new mill embodies a new concept developed by Western Gear engi-



Operational requirements were:
48 ft. of rise in 220 ft. of haul; maximum chain pull not less than 50,000 lbs. nor more than 65,000 lbs; haul 200 ft. of 24" diameter logs at 120 ft. per minute.

Extra measures of quality that made this design the most practical and economical choice over all other log haul drives are:

1. Infinite speed variation from 0-185 FPM permits continuous maximum mill flow regardless of variable debarking time.

2. Horsepower Limiter Control automatically adjusts for maximum preset horsepower to allow full capacity operation regardless of load.

3. Absence of shock loads. Electric motor runs continuously, softer starting of hydraulic drives eliminate major service problem.

4. Positive Overload Protection. High response relief valve removes pressure to motor, instantly sets fail-safe hydraulic brake.

5. Unitized Construction integrates base, valve components and piping into protected self-contained package, completely tested at factory.

The considerable knowledge of marine electro hydraulic deck machinery combined with their background in power transmission equipment and log haul was invaluable in the Western Gear development of this important new concept of log haul design.

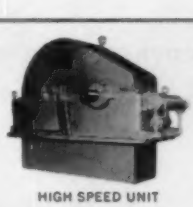
Western Gear's experience in electro-hydraulics and infinitely variable speed power transmissions can solve your drive problems. For full information, write, wire or phone:

INDUSTRIAL PRODUCTS DIVISION
P. O. Box 126, Belmont, California
Phone: LYtell 3-7611

INTEGRAL GEARMOTOR

PARALLEL SHAFT REDUCER

VERTICAL SHAFT REDUCER


HIGH SPEED UNIT

RIGHT ANGLE REDUC

DODGE HAS MORE PROVED BEARINGS THAN YOU HAVE BEARING PROBLEMS!

It pays to buy from a line of stock bearings—bearings that have been proved in thousands of installations similar to yours. You benefit by getting known dependability; and you get the important savings of high quality at production price.

PIN-POINT SELECTIVITY

Dodge has supplied mounted bearings to industry for over three-quarters of a century. Dodge bearings have always kept pace with improved production practices. Each new condition of service has been met by Dodge as it has arisen, with the result that the Dodge line contains mounted bearings to meet almost every service requirement with pin-point accuracy.

High load, high speed, excessive dust, moisture, corrosion, high or low temperatures, continuous operation—you name it!—such conditions and their combinations are met every day with Dodge bearings.

BROAD LINE—WIDELY DISTRIBUTED

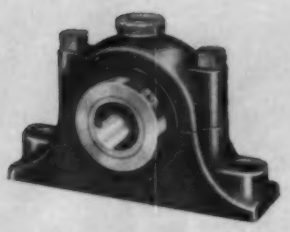
In the great variety of mounted bearings developed by Dodge, you will most likely find the precise unit to fit your requirements ideally—without paying for features you do not need. And if your requirements call for several types of bearings, there is an advantage in having them of common design, such as Dodge offers.

The Dodge line is probably broader than any other line of mounted bearings in America. And of special importance to machinery manufacturers, it is the most widely distributed line. There is always a Dodge bearing of the right type and size near at hand.

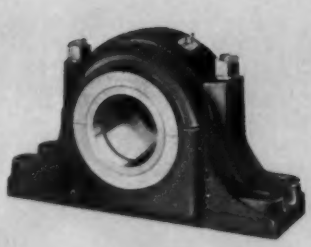
You can check this with your local Dodge Distributor. Ask him—or write us for the Dodge Bearing Bulletin.

In addition to tapered roller, spherical roller and ball bearings, Dodge builds many types of sleeve bearings. Here is the "large and small" of the sleeve type bearings carried in stock—ranging from an 8-in. Sleevoil weighing over 1200 lbs. to a ½-in. solid journal bearing weighing 9 ounces.

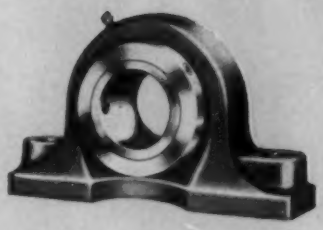
DODGE MANUFACTURING CORPORATION, 900 Union Street, Mishawaka, Indiana



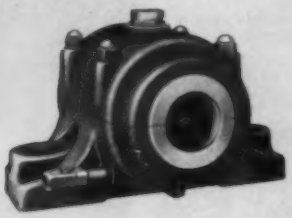
DODGE PILLOW BLOCKS WITH TIMKEN TAPERED ROLLER BEARINGS



DODGE SPHER-ALIGN PILLOW BLOCKS WITH SPHERICAL ROLLER BEARINGS

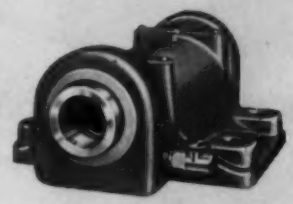


DODGE BALL BEARING PILLOW BLOCKS

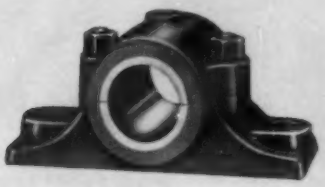


DODGE SLEEVOIL PILLOW BLOCKS

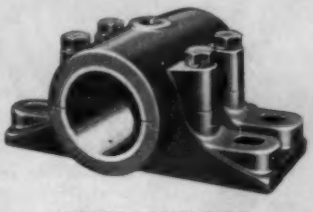
DODGE BRONZOIL PILLOW BLOCKS



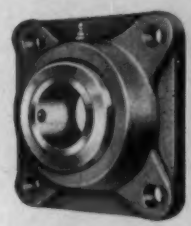
DODGE BRONZE BUSHED PILLOW BLOCKS



DODGE JOURNAL BEARINGS SOLID AND SPLIT



DODGE HEAVY RIGID PILLOW BLOCKS



FLANGE BEARINGS: HANGER BEARINGS: BEARING UNITS: TAKE-UPS

● **Dodge Pillow Blocks with Timken Tapered Roller Bearings.** America's quality pillow blocks. Assembled, lubricated, adjusted and sealed at the factory. 5 types for varying needs.

● **Dodge Spher-Align with Spherical Roller Bearings.** Rugged heavy duty, compact, inherently self-aligning. Exclusive Micro-Mount simplifies installation.

● **Dodge Ball Bearing Pillow Blocks.** Deep groove ball bearings with long inner races—high capacity. SL, SC and SCM models for light, normal and medium service respectively.

● **Dodge Sleevoil Pillow Blocks.** Ultra quality . . . extra long life . . . accessibility . . . *quiet*. Plain or water-cooled.

● **Dodge Bronzoil Pillow Blocks.** Efficient, low cost pillow blocks with self-oiling, capillary bronze bushings. Self-aligning. Large oil reservoirs.

● **Dodge Bronze Bushed Pillow Blocks.** Quiet fan and blower pillow blocks with two bronze bushings of high lead content mounted in one cast iron housing.

● **Dodge Journal Bearings — Solid and Split.** True running, dependable. Babbitted bearings with precision machined bores and faces. Finished bases.

● **Dodge Heavy Rigid Pillow Blocks.** Rugged, carefully bored, babbitted pillow blocks for many applications requiring grease lubrication. Finished bases and ends.

● **Bearing Units.** A wide variety—spherical seat, cartridge, flange, hanger, screw conveyor hanger, take-up. Ball, Roller and Sleeve types.

CALL THE TRANSMISSIONEER—your local Dodge Distributor. Factory trained by Dodge, he can give you valuable help on new, cost-saving methods. Look under "Dodge Transmissioneer" in the *white* pages of your telephone directory, or in the yellow pages under "Power Transmission Machinery."

DODGE

of Mishawaka, Ind.

These PEP units are compact, highly adaptable. Each size is available as an engine assembly, or in open or enclosed power units — equipped to fit your particular job.

put new PEP* into your jobs

Built for tough, demanding tractor service, Allis-Chalmers "Packages of Economical Power" will put real punch into your jobs. They are designed for hard work, and the thousands in daily service prove they can *deliver*.

These POWER-CRATER engines, with their short-stroke design, provide economical, big-power output. Allis-Chalmers' own trigger-quick governor keeps speed changes at a minimum, regardless of load variations.

These units are easy to maintain, too, with advantages like removable wet-type cylinder liners.

Parts and service are close by — at thousands of Allis-Chalmers dealers. Call on your dealer today to put new PEP into your powered equipment. Allis-Chalmers, Milwaukee 1, Wisconsin.

*Packages of Economical Power			
	B-125	G-149	G-226
Displacement, Cu. In.	125.2	149	226
Horsepower (gasoline)	28.3 @ 1900 rpm	45 @ 2000 rpm	67 @ 1800 rpm
Fuels: Gasoline, kerosene, distillate, and natural gas, plus LPG for the G-149 and G-226. Also diesel engines are in various models up to 516 h.p.			

POWER-CRATER is an Allis-Chalmers trademark.

ALLIS-CHALMERS

POWER FOR A GROWING WORLD

BC-24C

Let's Have a Big Show!

Jack Berry, chairman of the Hoo-Hoo International Wood Promotion Committee at Sacramento, Calif., has been bucking long and hard for a National Forest Products Week. The final declaration for the week, set for October 16-22 this year, has been announced by Hoo-Hoo's Snark of the Universe, R. W. Scott, Vancouver, B. C., lumberman. Hoo-Hoo will sponsor the week-long event.

It's a North American show

The project has been endorsed by the National Wood Council, the Canadian Wood Development Council and the National Lumber Manufacturers Association. It will be observed throughout U. S. and Canada on a voluntary participation basis. Each state and province will have a chairman appointed by Hoo-Hoo who will coordinate and help organize action throughout his area—working from community level on up.

Here is an opportunity to do a most unusual job for all forest products: lumber, plywood, boards, glued laminates, pulp and paper, wood flour, bark products and chemicals. Berry has gone so far as to layout a suggested list of events and organization to carry out participation. These range from mill and retail open houses; getting support of the press; radio and TV, from Chambers of Commerce, merchants, schools, parades and wood products fair exhibitions.

Here is something that can profit the industry. By applying a little vision and enthusiasm, a surge of public interest can be directed toward wood products in thousands of communities in this nation and Canada—it can be more effective than any world's fair.

Forest products are trees in use

Here is an excellent means of selling the idea to the people of this nation that "FOREST PRODUCTS ARE TREES IN USE." Why not wood communities built for the occasion! They could range from a house to a small community, depending upon the size of the marketing area. Buildings could be later sold and all costs realized. Not an unreachable objective for lumber, glued laminates, plywood, paper, hardboard, particle board, softboards, component structures. Why not commission selected architects to "put stars in their eyes and come up with designs that can well set the pace for the next 20 years"?

All industry members must help

The idea can die of inertia or it may become the means of demonstrating the tremendous size, variety and economic importance of the forest products industries. What better means is there of winning the public support of proper forest management? We have a means here demonstrating to the people of this nation and Canada how their forest products industries touch all their lives to make them easier and more comfortable.

Time is short! By starting now we can make it one of the greatest week-long nationwide shows that has ever been staged by any American or Canadian industry.

More details may be obtained by writing Mr. Jack S. Berry, 1507 21st St., Sacramento, California. ■■

Salable Panels from Refuse Plant produces door cores,

plywood cores, furniture stock from cull lumber, mill ends, low grades.

U. S. Blockboard Corp., Red Bluff, Calif., can produce up to 200 doors a day, on a 33"x72" basis, on one of its two core composers. The doors and/or panels it produces are in thicknesses of 5/4", 6/4", 7/4" and 8/4". Widths range from 11⅜" up to 36". Lengths are from 69" to 87". However, the machines are capable of turning out panels 12' square if need be.

Raw stock which the company processes must be not less than 4" wide nor less than 5/4, or may be 2x4's. The most desirable dimensions are 2x8's or wider. These have proved to be the most economical to handle. Purchases of mill refuse by the company are in mbf lots.

When delivered, stock is sorted by length and thickness. Width is not a problem. Stock which meets the moisture content limits is stored in the three-sided shed which forms one end of the building. Other stock is stacked for air drying.

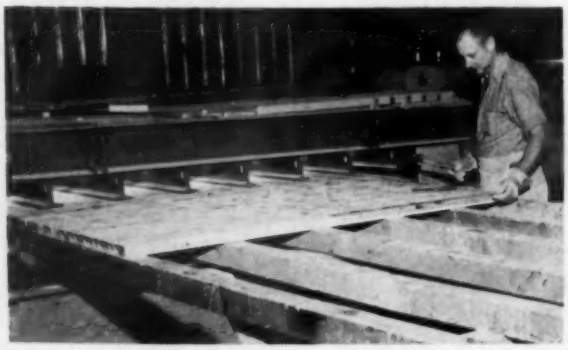
Finished panels are graded either No. 1 or No. 2. Some are shipped rough and some are run through the Woods planer. Many customers order trimmed, rough-surface stock and do their own finishing. All orders, however, are shipped banded. A door may weigh from 40 up to 100 pounds.

The plant is housed in a 90'x240' Butler steel building and employs 16 people.

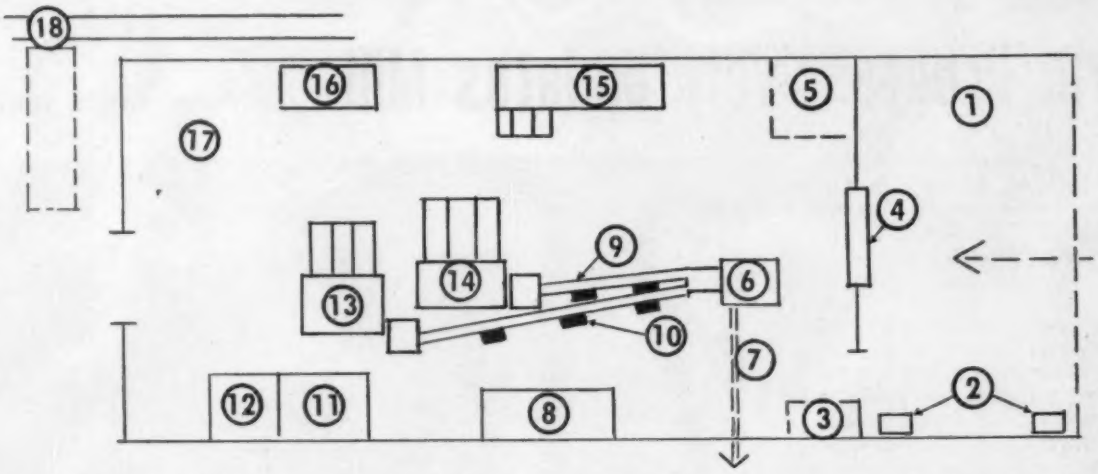
In rough form, here is salable product from material which was mill refuse. Production runs heavy to pine, which this is. White fir is next and finally, there is some red fir and cedar. Planer refuse is the most suitable and most economical raw stock.

1 Unloading at yard, following a haul which might be 50 miles. Fifty miles is figured as the maximum economic radius for hauls. This Hyster is also used in the plant proper. In addition to it, the company uses two Gerlinger lifts and a Ross carrier.

4 At the layup table, stock from belt conveyor is slid onto feed table and onto continuous feed position. Glue is applied here. A cut off saw is at the man's left. Stock is four inches and longer. It has traveled past three defect saws on this production line, or on other line past two saws.



5 At the outfeed side of the core composer, the continuous glueup panel is being broken into sizes. A hammer and chisel are used. A quick blow parts the panel. From here, panels go to a stack-storage area where they set for 24 hours. Trimming and, when ordered, finishing, follow next.

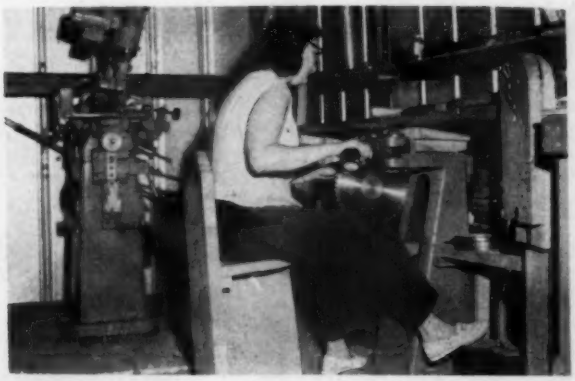


1. Dry storage area, lumber
2. General purpose cut off saws
3. Conway Blowpipe Mfg. Co. blower system
4. Shop-built cut-up saw
5. Saw filing, grinding area
6. Torwegge multiple rip saw
7. To burner
8. Borden glue mixing area
9. Belt conveyors from rip.
10. Five defect saws.
11. Wash room
12. Office
13. Torwegge 12' electronic core composer
14. Torwegge 12' electronic core composer
15. Combination edger and trim for panels
16. Woods planer
17. Storage area
18. Rail siding and ramp.

2 Checking moisture content is the first manufacturing step. Maximum content is 12%; 6 to 8% is preferred. Instrument is a Delmhorst Instrument Co. moisture detector.

3 Multiple rip saw is being used here to re-run cull panels, from the cart at right. Basic stock in shorter lengths goes directly to this unit. Longer lengths are first handled at the cut-up saw in the wall between the production and dry storage areas. Two saws cut them into three pieces and they go to the rip saw.

6 Combination edge and trim unit is 1-man operation. Six rubber-tired wheels and two saws are housed in box just beyond foreman Charles Davidson. Wheels in front speed panels onto trim table. Air-operated arm holds panel while air-operated back bar pushes them through two 14-inch saws. Spring-loaded arms on outfeed table control the cycle.



7 All saws in plant are serviced on the premises, in this Vollmer-Werke equipped shop. The lady is not posing for a picture; she does nearly all the saw filing and grinding for the plant. ■■

Firm Progressively Updates Mill

New units include

With 50 years of experience behind it, the C. M. Christiansen Co. of Phelps, Wis., realized that to remain competitive it had to modernize. An extensive program, inaugurated a little over a year ago, is now a production reality.

The sawmill's present daily production averages about 35,000 feet of northern hardwoods or 75,000 feet of northern softwoods per 8-hour shift. Shipments average 35,000 to 50,000 a day, much of it going to the Chicago industrial area via the company's own diesel truck and tandem trailer units, as well as by rail. Production is 70% hardwoods and the remainder hemlock, red and white pine, spruce, and cedar. Northern hard maple leads the hardwood species produced, with the other hardwood species following in this order—yellow birch, basswood, ash, elm, red oak, and aspen. The company also operates a large cedar pole and products department with complete treating facilities.

Logs are sorted by species and sawn on order. In fact, the sorting starts in the woods. Logs are hauled from company timberlands—all within a radius of 40 miles. Peeler veneer logs are sorted out and sold.

The sawmill itself is marked as the next step in the modernization program. It is a band type mill with horizontal band resaw.

In planning its modernization program, the C. M. Christiansen Company chose Armco All-Steel buildings for a number of reasons:

- They can be disassembled at any time and still have a 50% reclamation value.
- They had to be put up fast. The company was working against time. A backlog of stock to be milled was building up.
- Company crews could do the assembling. All buildings are bolted together, with all bolts on the inside.

In addition to the sawmill, planing mill, and kiln facilities, the present firm has a wood specialty affiliation for the production of pallets, industrial blocking, and other wood utilization products.

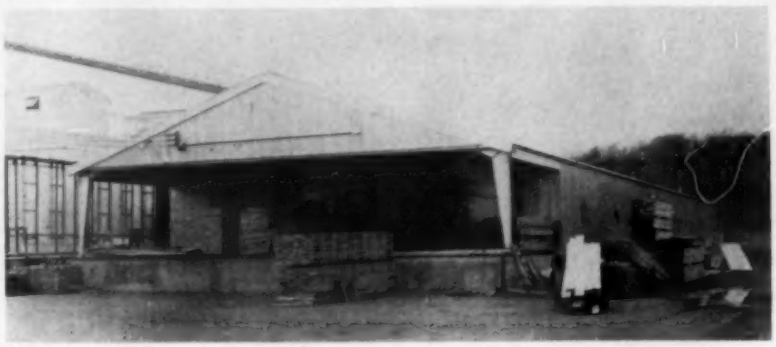
Equipment

ARMCO steel building, IMRIE dry kilns, CHEVROLET trucks, CARY-LIFT lift trucks, HOSMER debarker, NEWMAN planer, MCDONOUGH resaw, ALLIS-CHALMERS wheel tractors, HONEYWELL kiln instruments, GENERAL ELECTRIC motors, WESTINGHOUSE motors, YALE fork lifts.

New barking system

Cary-lift unloads logs from company shuttle truck and will feed them to barker. Company does no chipping as its customers prefer to do their own.

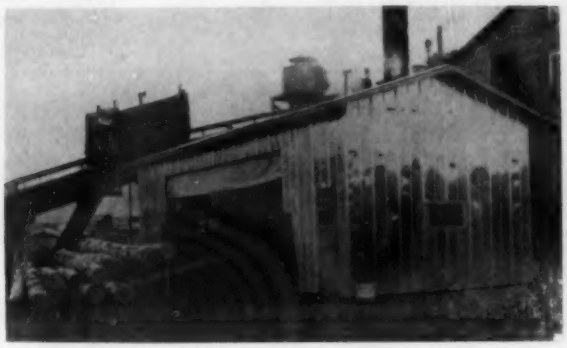
New planing department



Planing mill is 204x60-foot structure. Concrete loading dock, under roof, is for truck loading. Rail siding is at far side. Located conveniently close are the kilns, left background, and storage shed to right of photo.

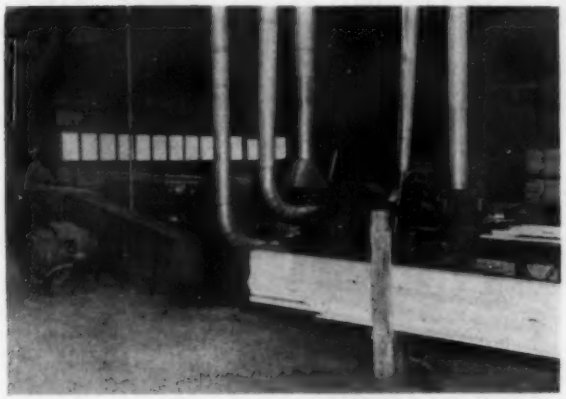
All-steel Armco storage shed is used mostly for milled stock ready to ship. This shed measures 200x20 feet and is 14 feet to the eaves.

planing mill, kilns and debarker.

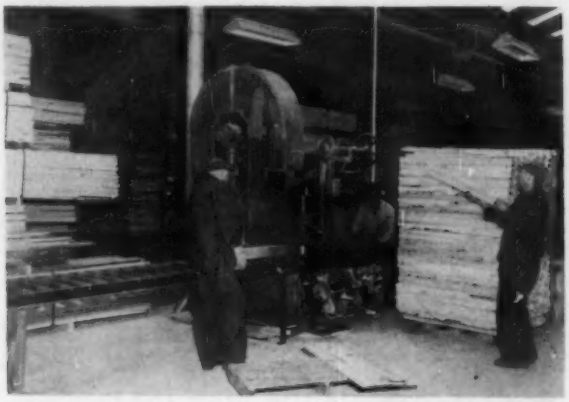


2 Separate debarker building is company-fabricated of aluminum siding over frame construction. Cary-lift delivers logs to be barked at the far side, removed clean logs from bottom of ramp at left.

3 New Hosmer debarker is the major production unit in the barking system. Power for the rosser-type head is a 15-hp GE motor. A 5-hp Westinghouse motor powers the turning wheels.

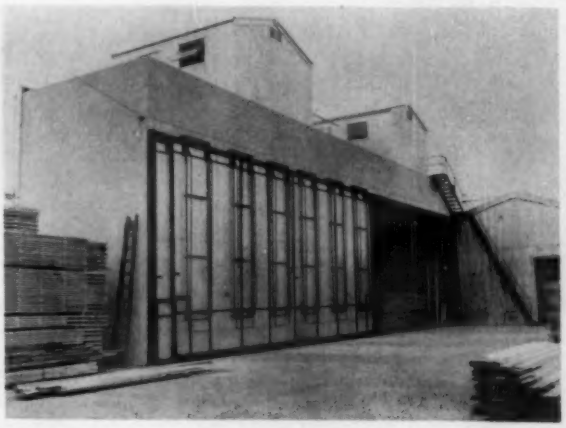


2 Inside planing mill is a new Newman "500" planer. Machine is fed about 125 linear feet a minute. Yale fork lift handles lumber in this area.



3 Planer equipment includes McDonaugh RA59 vertical planer. Fluorescent lighting and skylights assure ample light. Radiant system heats structure.

Sipho fan kilns from Imrie Dry Kiln Co. emphasize simplicity and economy. They are direct fork lift truck package loading. Capacity in each of two units installed is 30,000 board feet 4/4 with 24 units 4x4x16 feet or 36,000 board feet 4/4 in 4x4x12-foot units. All operating equipment and controls are located outside the drying chamber. The heating system consists of two copper tubes, aluminum fin, steam blast coils. Only one vapor vent damper is used and this is located in a rear wall of supply air plenum at back of kiln. Automatic controllers are multiple thermocouple and proportional control ElectroniK potentiometers. Dry bulb temperatures are read from all four and controlled from any one of the four thermocouple points in each kiln. Wet bulb temperatures are read from both and controlled from either of the two wet bulb temperature points. ■■



Log Decking System Consisting of Concrete

logs and feeds new, automated sawmill of Placerville Lumber Co., Placerville,

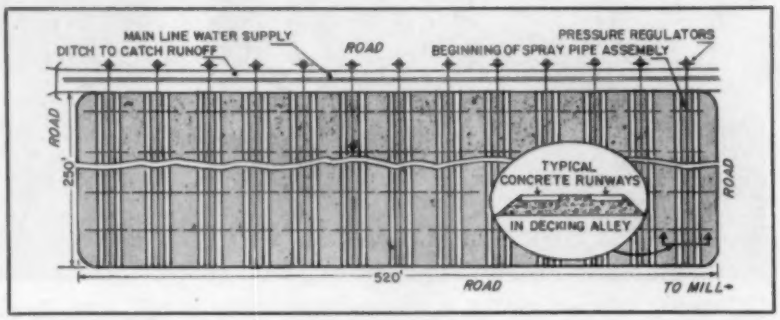
The new decking system will offer these advantages:

- Easier sorting of species
- More efficient feeding of logs to the sawmill
- Reduced maintenance on log handling vehicles
- Reduced maintenance on decking area ground
- Steady, all-weather operational pace for log handling vehicles year 'round.

The company depends on the open market for its log supply and so must take all sizes. It does not feel a pond is any good for a small log operation. And with this system, it by-passes pond construction costs.

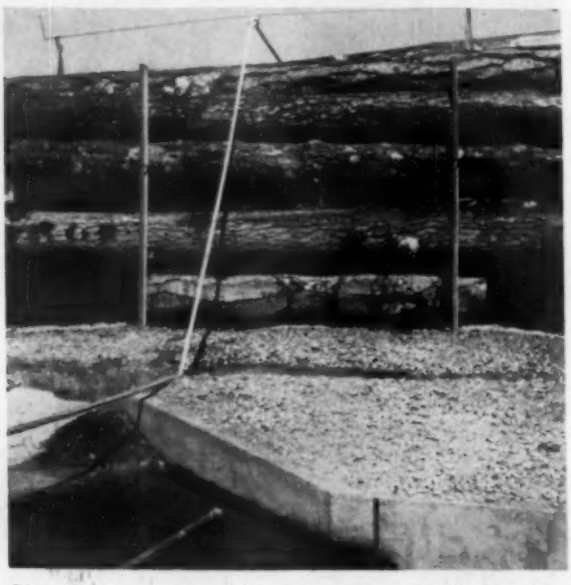
Decking and undecking will be speeded up appreciably. The essence of the system is savings in speed, time and maintenance.

The new mill, a 6-foot band operation, is scheduled to cut 1.2 million feet a month.



Final clean-up touches are being applied here to the last decking alley, number 13, toward the mill site. Each alley has two strips 5 feet wide. They are 8 inches thick, reinforced. Space between the runways is 3 feet. Side slopes are each 13.5 feet. Entire deck area was rocked with 1½-inch rock prior to installation of the system. The steel rail uprights are used to retain initial logs decked.

Viewed from first alley deck, right, toward the final alley and mill site, sprinkling arrangement is seen. On far side of ditch there is 6-inch main line. Take-offs from this line cross ditch and rise out of ground just behind regulators. Spray arms are supported on wooden cross-trees. Sprinkler line is 2-inch pipe.

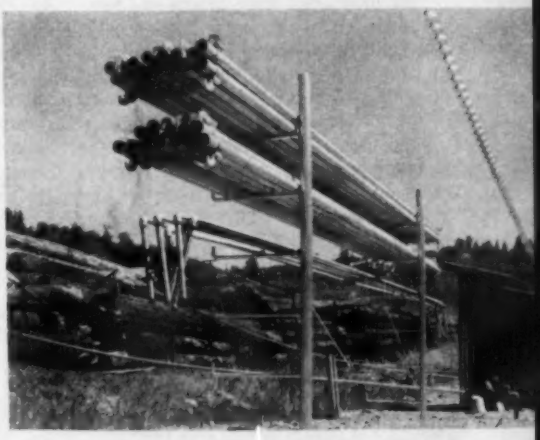


Pipe from pressure regulators is aluminum irrigation pipe, with quick attaching couplings. This view is of the first alley, across from catch basin where some water will be recovered. Dark area at extreme end of concrete wall is return area where water from alley drains is running down. Two-thirds the way up the rail uprights may be seen anchor chain which helps retain the deck so that all weight does not push directly against the rails.

Runways, Extensive Spray System effectively handles

Calif. The firm has eliminated the extra cost of a log pond.

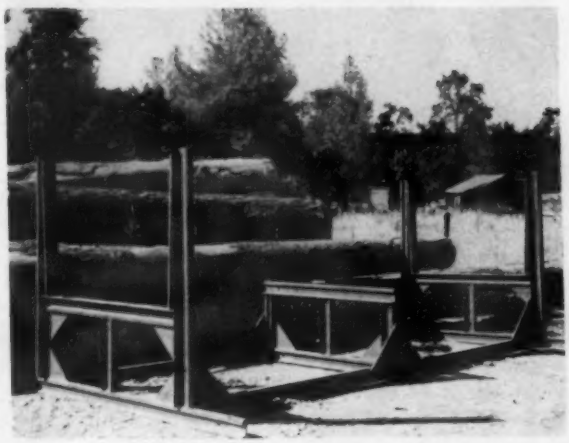
Water comes to the system from a storage tank 160 feet up a nearby hill. Pressure is reduced along the line by these Watt regulators. Note turn-off valve. Overflow from catch basin goes underneath road to right.



Service rack holds extra section of take-off and actual spray line. Protrusions on the take-off lengths are the quick coupling attachments. Small building shown is a fire extinguisher house. Chain at right is painted with aluminum paint and is strung on red-painted uprights. Chain protects full length of regulator line.

At open end of decking area a company Peterbilt is unloaded by Clark log handler, one of two vehicles to be used. The other is a Michigan. Logs are simply pushed off the trailer. They will be sorted later. Truck is quickly on its way for another load. The Clark will be used for decking, will deck 16 feet high. Roadway is 60 feet wide and can be used up to 90 feet. Thus, if there is a rush of trucks, loads can be pushed off on either side of center path the full length of decking area. It's expected that the Clark and Michigan will handle any volume that may be delivered to the mill.

The two vehicles are not to be used at the same time at all hours. One is kept in reserve. Operators of the vehicles work an overlapping shift, the second one coming on at 11 in the morning and remaining until 8 at night.



Steel rail racks will be used to speed up sorting. The company has four. Loads dumped here will be sorted by one vehicle and since all alleys will have but one species, the second vehicle will quickly deck and/or feed the mill direct. ■■

Lumber Salesmen From Within Ranks are developed

in training program that emphasizes knowledge of all phases of the industry.

Not long after the Goodman Lumber Company, Goodman, Wis., was acquired by Calumet & Hecla, Inc., its annual production was more than doubled. This posed a problem that needed a quick answer: How to step up the sales pace proportionately.

There was not a ready reservoir of experienced lumber salesmen available in the area. Hiring "just any salesman" would not do, so the company decided to turn its attention inward, to find men in the organization with sales potential and develop them as efficiently as possible.

The Goodman Lumber Division began screening employees on the scores of personality, aptitude, knowledge of lumber, and desire. Trainees were then started through the intensive program outlined below to thoroughly acquaint them with all phases of forestry, production, office and sales techniques.

This program, with the trainee moving from one job to another as he achieved a working knowledge of each, was scheduled over a one-year period, and this was found to be adequate time. The accompanying photos follow Trainee John Criel through the course.

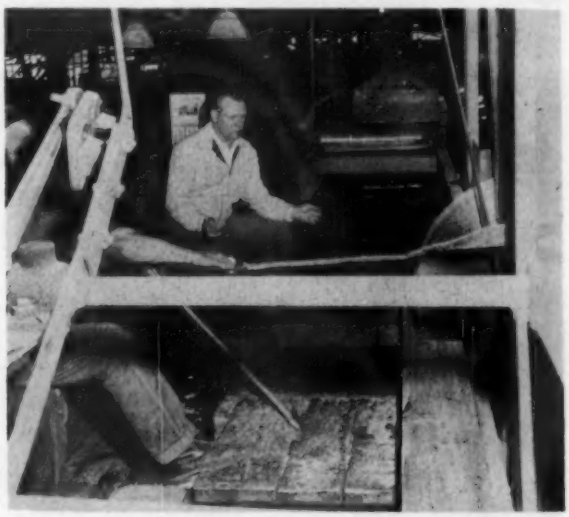
Company officials feel the program is an impressive success. Moral-wise, it has been a good thing internally, because it offers still another career opportunity for the young local men who came to work at Goodman.

George A. Houghton, Jr., manager, says, "We are on our way now to developing a staff of competent, home-bred salesmen who know the industry, our business, our products, and the requirements of our customers."

Trainee John Criel is conducted on a tour of the mill so that he will better understand how the product he will sell is manufactured. As a result, he will know the quality of product his firm manufactures, and be better qualified to sell it.

Explanation is given on factors that determine whether yellow birch log will go for veneer or lumber.

"But how can you decide so quickly what grade to make the veneer?"



"Why cut it off there?" Criel learns how careful manufacture upgrades the products.

TRAINING SCHEDULE

Yard, planing mill, dimension mill, dry kilns.

1. Learn terminology—Glossary of terms.
2. Familiarize him with grades and their meaning.
3. General knowledge of species, thicknesses, and grades.
4. How to prepare a tally.
5. How to compute a tally.
6. How orders are handled.
7. Planning for schedule of shipments.
8. Yard layout—locations of grades and species.
9. How lumber is cared for.
10. How lumber is prepared for shipment.
11. Work with grader to learn marking, scaling
12. How to estimate piles, widths, and lengths.
13. Standard thicknesses.
14. Planing mill work and lumber kept in dry shed.
15. What dimension lumber consists of.
16. General idea of quality of dimension produced.
17. Kiln operations.
18. Billing of cars and trucks.
19. Handling retail orders.
20. Inventory.

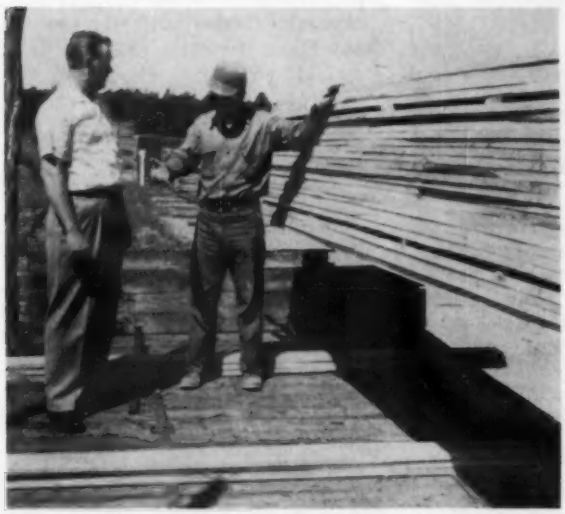
Attend lumber inspection school at Ford Forestry Center, Alberta, Mich.

Sawmill, log yard, lath mill, chip mill, tie operations.

1. Flow of logs.
2. Scale of logs to mill and on deck.
3. Scale of lumber at transfer.
4. Terminology.
5. How sawmill operations are tied to sawing orders.
6. Handling of slabs and edgings.
7. Lath and Square operation.
8. Chip production—size of chips, screening, quality, etc.
9. Billing cars.
10. Tie operation including grading and car loading.

Veneer plant

1. Processing of orders.
2. Tallies and grades.
3. Loading, shipping, and billing.
4. Packing.
5. Sizes, grades, etc.



Proper stacking of lumber for air drying will result in a better, more salable product.

Trainee Criel learns that every piece of lumber will be utilized to make a product for him to sell.

"I didn't know you had to add steam as well as heat for drying lumber."

"So this is where the chips go." An important by-product of the plant is explained. ■■

Northwest Hardwood Industry was practically non-existant

faces a bright future. Here, an expert reviews its growth, tells of potentials

By JACK R. PFEIFFER
Harbor Plywood Co., Los Angeles

The author, at left, stands beside golden chinkapin left behind after logging Douglas fir near Philomath, Ore. Handsome, straight-grained wood from such trees is a valuable resource little developed.

Mr. Pfeiffer was formerly in charge of lumber seasoning at the Forest Products Research Center in Corvallis, Ore., and was one of the leaders in establishing the young hardwood industry in the Northwest.

The hardwood industry of the Northwest is growing. While hardwoods will never challenge the superior position of western softwoods, they have considerable potential importance.

A dozen well-organized mills in Oregon and Washington process hardwood timber. In addition, as many or more occasionally cut hardwoods, or cut them along with softwoods. Most of these plants produce lumber for shipment to major marketing areas in Los Angeles and San Francisco. A few manufacture turning squares, and an occasional plant produces paneling and interior trim. The several furniture plants in the Northwest usually cut hardwood lumber in their own mills from logs purchased on the open market.

An interesting segment of the hardwood industry is based largely on products requiring only small amounts of timber. Such items as gunstock blanks, sporting goods, tool handles, charcoal, veneer specialties, and toothpicks may not require large-volume production so much as they need a skilled operator.

Species milled by western hardwood manufacturers include red alder, Oregon maple, Oregon ash, California laurel or Oregon myrtle, black cottonwood, and small amounts of California black oak, Oregon white oak, and Pacific madrone. Alder, maple and ash comprise nearly all the volume used. Statistics are not available to show the annual volume processed, either by individual species, or combined. Furthermore, there is no reliable estimate of total product value.

The industry has been plagued by instability. In recent years, some stability has been achieved through efforts of the Northwest Hardwood Association and successful operators with reputations for dependability.

Several conditions have hindered full development of the northwest hardwood industry. Abundance of softwoods early led to widespread knowledge of milling practices suitable to such trees. But hardwoods need special treatment in sawing and drying to develop full value from the wood.

Milling and drying hardwoods by practices suited only to softwoods led to losses. In consequence, belief arose that western hardwoods were inferior to eastern or southern trees.

Northwest hardwoods are not found in large, pure stands. Rather, they

Here are the present uses . . . and potential future uses for the many western species.

Species	Est. volume available**	Present Uses																		Additional Potential Uses														
		Boxes	Charcoal	Core stock	Flooring	Fuel	Furniture	Gunstocks	Handles	Millwork	Novelties	Dars	Paneling	Plugs	Pulp	Specialty Items	Veneer	Woodenware	Cabinet work	Caskets	Charcoal	Cooperage	Cross ties	Flooring	Furniture	Novelties	Pallets	Paneling	Pulp	Ship construction	Shuttles	Sporting equipment	Toys	Veneer
Red alder	9,150			X		X	X			X	X		X	X	X	X	X	X	X	X								X				X	
Oregon maple	3,300				X	X	X	X		X	X		X	X		X	X	X	X		X						X	X				X	
Oregon ash			X		X		X		X	X		X					X					X		X			X				X		
Golden Chinkapin																			X	X					X		X	X	X					X
Black cottonwood	1,000	X		X			X								X	X	X																	X
Pacific madrone			X			X			X									X	X					X	X	X	X				X			X
Calif. black oak	2,400		X			X													X			X	X	X		X		X					X
Oregon white oak			X			X													X		X	X	X	X	X	X		X					X
Oregon Myrtle (California laurel)								X	X			X		X			X	X	X						X	X		X						X
Tanoak	3,700		X			X													X		X		X	X	X		X		X					X
Pacific dogwood																										X				X				

* From Oregon hardwoods, Extension Bulletin, 775. Federal Cooperative Extension Service, Oregon State College, Corvallis, Ore.
** In California, Oregon, Washington, for species where volumes have been estimated.

10 years ago. Today it for the future.

usually are scattered among the softwoods, or are in small stands. Overshadowed by vast forests of softwoods, the volume of potentially valuable hardwoods has seemed inconsequential.

Volume of hardwoods in the Northwest is much the same as in states noted for hardwood production. An estimate in 1955 by the California Forest and Range Experiment Station rated the saw log volume in Pacific Coast States as 23 billion board feet.

Hardwoods available, then, are sufficient to establish an industry that can add considerably to the region's economy. One estimate suggested this industry might contribute about $20 million in total annual wages, and value of products could amount to about $50 million a year.

Major advancements of the Northwest hardwood industry during the past five years, including:

- Use of small alder trees for pulp.
- Acceptance by the furniture trade of such species as red alder, Oregon maple, and Oregon ash.
- Increasing interest of large hardwood timber owners in finding use for hardwoods.
- Recent establishment of several red alder tree farms.
- Building of a profitable operation based on alder for lumber as well as pulp, by one of the largest manufacturers of wood products in the Northwest.
- Creation of the Northwest Hardwood Association, where problems of the industry can be studied and solved collectively.

Prospective hardwood operators should expect keen competition, despite availability of a resource now largely unused.

Anyone considering a hardwood enterprise should carefully plan his operation and fully investigate markets before investing much capital. He should obtain all pertinent information on such subjects as equipment requirements and operation, manufacturing processes, the raw material he will be using, and products he intends to produce. Caution is to be encouraged in planning, and careful thinking based on reality is highly important.

At present, the hardwood industry of the west coast, compared with eastern hardwood operations, has in its favor low stumpage costs and low transportation costs to California markets. These advantages are offset to some extent by high wage rates. It seems reasonable to expect that, in time, the only factor in favor of the western operator will be transportation costs lower than for the east.

Two interesting experimental efforts of private companies undoubtedly will substantially advance the hardwood industry. In one instance California black oak is being investigated thoroughly for use as hardwood dimension and flooring. In the second instance, Oregon white oak is being investigated for use as railroad ties.

Promising products. Several companies are attempting to produce veneer from red alder, Oregon maple, Oregon ash, Pacific madrone, Oregon white oak, California black oak, and Oregon myrtle. Large operations that appear to offer the greatest promise for using solid wood rather than fiber are the manufacture of lumber, hardwood dimension, flooring, and veneer and plywood. These four operations require substantial capital investment to operate efficiently. Two or more could be combined in a single plant, but differences in equipment and methods makes separate descriptions desirable. ■■

Mechanical properties (strength values are percentage based on red alder) of western hardwoods compared with some eastern species.

SPECIES	BENDING RESISTANCE	SHOCK RESISTANCE	ENDWISE COMPRESSION	BREAKING STRENGTH	HARDNESS
RED ALDER	100	100	100	100	100
Yellow poplar	89	89	93	92	63
OREGON ASH	127	102	109	130	179
Green ash	120	139	122	145	205
CHINKAPIN	112	109	112	109	124
American chestnut	88	88	89	98	74
BLACK COTTONWOOD	78	78	78	85	59
Eastern cottonwood	93	90	93	89	78
PACIFIC MADRONE	131	210	143	165	224
Black cherry	107	109	99	126	138
OREGON MAPLE	105	---	104	102	124
Silver maple	83	104	98	98	98
CALIFORNIA BLACK OAK	128	138	118	130	135
Northern red oak	152	152	114	144	210
OREGON WHITE OAK	130	139	123	138	224
White oak (Q. alba)	136	156	123	152	210
OREGON MYRTLE	98	118	107	112	145
Black walnut	124	128	113	140	174
TANOAK	126	---	138	140	238

Western hardwoods compare favorably with the eastern species (Western species are in Caps).

SPECIES	SPECIFIC GRAVITY green volume oven-dry weight	WEIGHT at 12% moisture content	SHRINKAGE VOLUMETRIC	SHRINKAGE RADIAL	SHRINKAGE TANGENTIAL
		Lb/cu ft*	%**	%**	%**
RED ALDER	.41	26	12.8	4.4	7.8
Yellow poplar	.42	28	12.8	4.0	7.8
OREGON ASH	.55	36	13.2	4.8	8.8
Green ash	.56	40	12.2	4.6	7.8
CHINKAPIN	.46	32	13.2	4.6	7.6
American chestnut	.43	30	11.6	3.4	6.6
BLACK COTTONWOOD	.35	24	12.4	3.8	8.8
Eastern cottonwood	.40	28	14.8	3.5	9.2
PACIFIC MADRONE	.69	48	17.4	5.4	11.9
Black cherry	.50	35	11.6	3.7	7.8
OREGON MAPLE	.48	34	11.6	3.7	7.8
Silver maple	.47	33	12.0	3.6	7.2
CALIFORNIA BLACK OAK	.57	40	12.8	3.6	8.6
Northern red oak	.63	44	13.5	5.0	9.2
OREGON WHITE OAK	.72	50	13.4	4.2	9.0
White oak (Q. alba)	.68	48	15.6	5.2	9.0
OREGON MYRTLE	.55	39	11.6	3.8	8.8
Black walnut	.55	38	11.6	5.2	9.8
TANOAK	.82	45	14.9	5.5	10.0

* Bar lengths are based on red alder weight; numbers in bars are actual weights.

** Bar lengths are based on red alder shrinkage, green to oven-dry; numbers in bars are actual shrinkages.

Chipping Center Increases Residue Utilization

One of the greatest conservation measures in the history of New England forests is the increased use of once-wasted wood for the manufacture of chips for pulp. The Brown Co., Berlin, N.H., alone is supplied by half a dozen chipping centers located in Maine, New Hampshire, and Vermont. One of these, the Lake Region Chipping Corp. of Ashland, N. H., was started two years ago by Lloyd W. Hawkensen, formerly a pulpwood buyer for the Brown Co. Woods Department.

Founding of the Ashland plant carried out Mr. Hawkensen's belief that sawmill and paper mill owners would mutually benefit from a central chipping operation. Alternatives are chipping facilities at every sawmill and direct delivery to paper mills, or chipping by the latter.

"In New England," Hawkensen says, "with many small sawmills, operators profit best by centralized chippers. This is much more economical than installation of expensive machinery at every mill. The development of better, less costly debarking machines," Hawkensen emphasizes," has perhaps been the most important single factor in spurring the development of the chipping of wood residue for paper."

1 This plant produces 60 cords or 3 to 4 carloads a day with three men: two chipper feeders and a fork lift truck operator. Gerlinger-Tow-motor lift feed barked and bundled slabs to plant.

2 Two 4-chain slab decks move bundles into plant. Bundles are 4 and 8 feet long, 4 feet high . . . run 3 to 7 tons. Strapping is Acme ¾-inch. Slab decks are controlled by floor buttons.

Saw Filer's Room

Japanese filer describes method of heat-tensioning saws and a system of welding together two worn band saws.

By YUKI YOSHIDA
Hiroshima, Japan

I believe your readers would be interested in the successful filing room achievements I have made since I wrote an article for THE LUMBERMAN which appeared in the February 1954 issue. These techniques are in heat tensioning band and circular saws and in welding two worn bands into one full width saw.

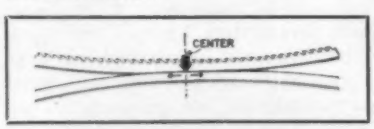
Some months ago a newspaper here published an article about my heat tensioning methods. The article created country-wide interest. A well known professor in the Engineering Department of the University of Hokkaida came to Hiroshima to witness my new method. I have had more than a hundred visitors. The filing room practices I have developed appear to have been the biggest innovation ever made in the history of the band saw filing trade in this country.

What I have done may not be news to American filers and other readers of THE LUMBERMAN but nevertheless I believe they will be interested in a summary of the methods I have developed and now use.

Welding two old band saws into one.

(1) Use a welding clamp somewhat like the Armstrong with a special device attached to it that makes it easier to weld a saw lengthwise.

(2) Give each band a crown in a way the two bands crown out to form like this sketch:



(3) Start welding from the middle, moving to one end and then back from the middle to the other end.

(4) Give a light forging on one side in each space—that is about three inches in length.

(5) When the weld is made the entire length of the saw, turn the inside out and forge in the weld until it is built up to the thickness of the blade. This prevents the saw from being dished and also does away with grinding or filing off the weld.

(6) Final heat treatment or softening. The saw thus welded works just as satisfactory as a new one and does not raise the noise level.

Heat tensioning a circular saw

(1) Level or take out lumps and ridges in the saw and hang it on a filing clamp, holding the burner in one hand and the saw in the other.

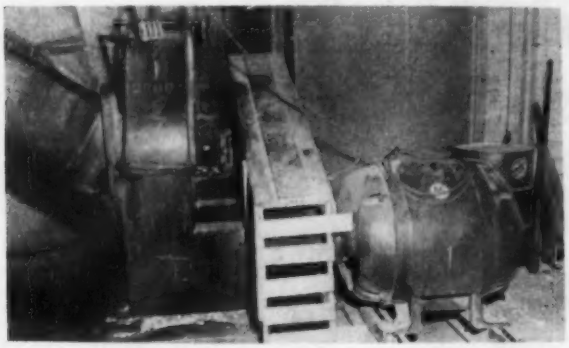
(2) Start heating the saw near the gullet. Watch the opposite side for color change at the spot being heated.

One of the big advantages of central chipping is that the chipping plant can act as a buffer for the paper mill—by furnishing supplementary storage. Hawkensen now chips for 11 mills—started with five.

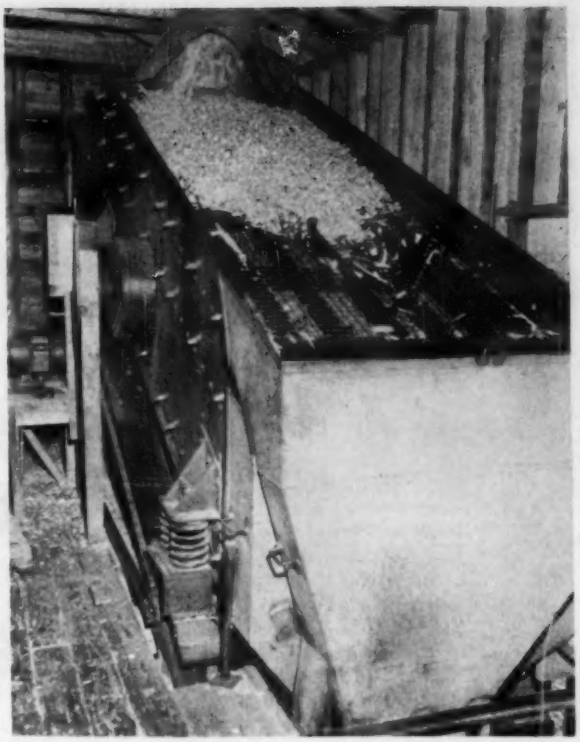
All wood is bought by weight. A Martin-Decker scale on the forklift weighs the bundles of slabs as they are being unloaded from the trucks. The strapped bundles vary in size, depending on the equipment at the supplying mill.

The chipping center has furnished debarkers for the sawmills on a lease basis. The mills own the debarkers when payments are completed. Most of the debarkers furnished have been Hosmers.

Hawkensen is aiming at chipping 100 cords per man per week.



3 Hansel chipper produces 8 cords an hour at 600 rpm. Motor is 200-hp. Allis-Chalmers with 2-1 reduction. The 60-inch, 8-knife chipper is set to cut ⅝-inch chips which go to Brown Co.



4 Chips are screened on Link-Belt triple-deck 5x12 screen. Overs go back through the chipper; fines are dumped outside. A wide belt running under the screen carries accepted chips directly to rail cars. ■■

(3) Keep the saw still until the first blue spot appears. As soon as the blue spot appears give one space turn to the saw and repeat the heating process. This leaves a blue spot down each gullet all around the saw.

(4) Permit the saw to cool off by itself. My experience show that special automatic devices are unnecessary in heat treating circular saws.

Heat tensioning band saws

(1) Use a clamp especially designed for holding the saw tight and straight lest the front edge be bent when heated.

(2) Install the clamp along the leveling block on the bench with the burner firmly placed on its support.

(3) Slow down the feeding speed of the saw stretcher to three feet per minute. The stretcher is used for feeding the saw with pressure just sufficient to feed the saw and not affecting the tension.

(4) The leveled saw is thus heat treated.

(5) The front edge is so treated that a blue colored stripe about 2/8-

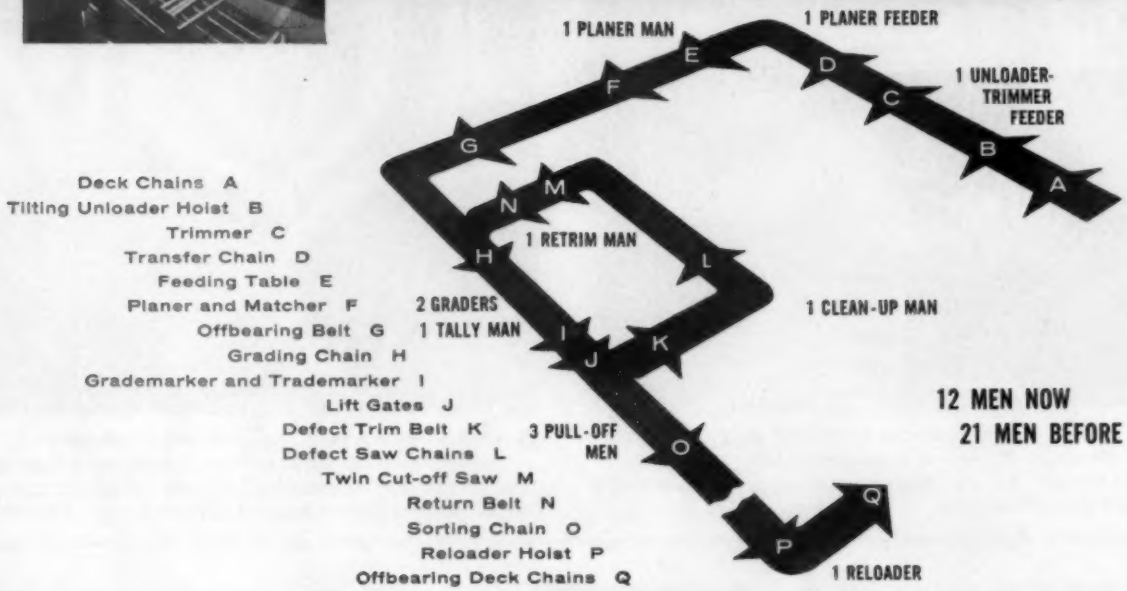
(Continued on page 87)

YUKI YOSHIDA AT WORK on welding of two band saws into one. Note the special clamp he uses to hold the bands tightly together while the weld is being made, working in both directions from weld.

HEAT TENSIONING of a band saw, Yoshida uses a specially designed clamp for holding saw tight and straight. Clamp is installed on leveling block on bench and the burner is firmly supported.

Progress Report:

SEABOARD'S "ONE-SHIFT" PLANING MILL



A completely integrated "years ahead mill"... equipped by STETSON-ROSS

Seaboard Lumber Company, Seattle, Washington, producers of high quality green dimension, wanted to concentrate their production into a more profitable 'one-shift' operation. They asked our sales engineers:

"Would Stetson-Ross provide a 'one-shift' planing mill that would substantially reduce costs?

"What new operating procedures would be needed?

"How much would it all cost?"

The result is this new, integrated planing mill with the matched capacity equipment listed above, *all* Stetson-Ross built except item C. Our sales engineers worked out a production flow chart, specified equipment, and planned the installation. The following advantages are being realized:

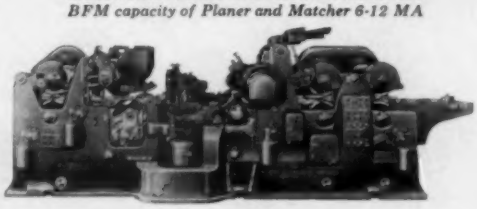
One shift produces what two formerly did. Top speed increased from 400 lineal feet per minute to 600. Output per man up 70%.

Nine fewer men on payroll—saving 18,000 man hours yearly.

There are fewer break-ups. Mill is cleaner. Product is improved.

Our offer to you: If your firm, too, wants to speed production and reduce costs, perhaps even build a complete new mill, write us. No obligation is involved in discussing the problem. Stetson-Ross Machine Company, Inc., 3200 First Avenue South, Seattle 4, Washington.

Stetson-Ross WT 100 Grademarker matches 600 BFM capacity of Planer and Matcher 6-12 MA



STEP AHEAD WITH

STETSON-ROSS

WOODWORKING MACHINES
CONVEYING AND HANDLING SYSTEMS
COMPLETE PLANING MILLS

Growing for the Future

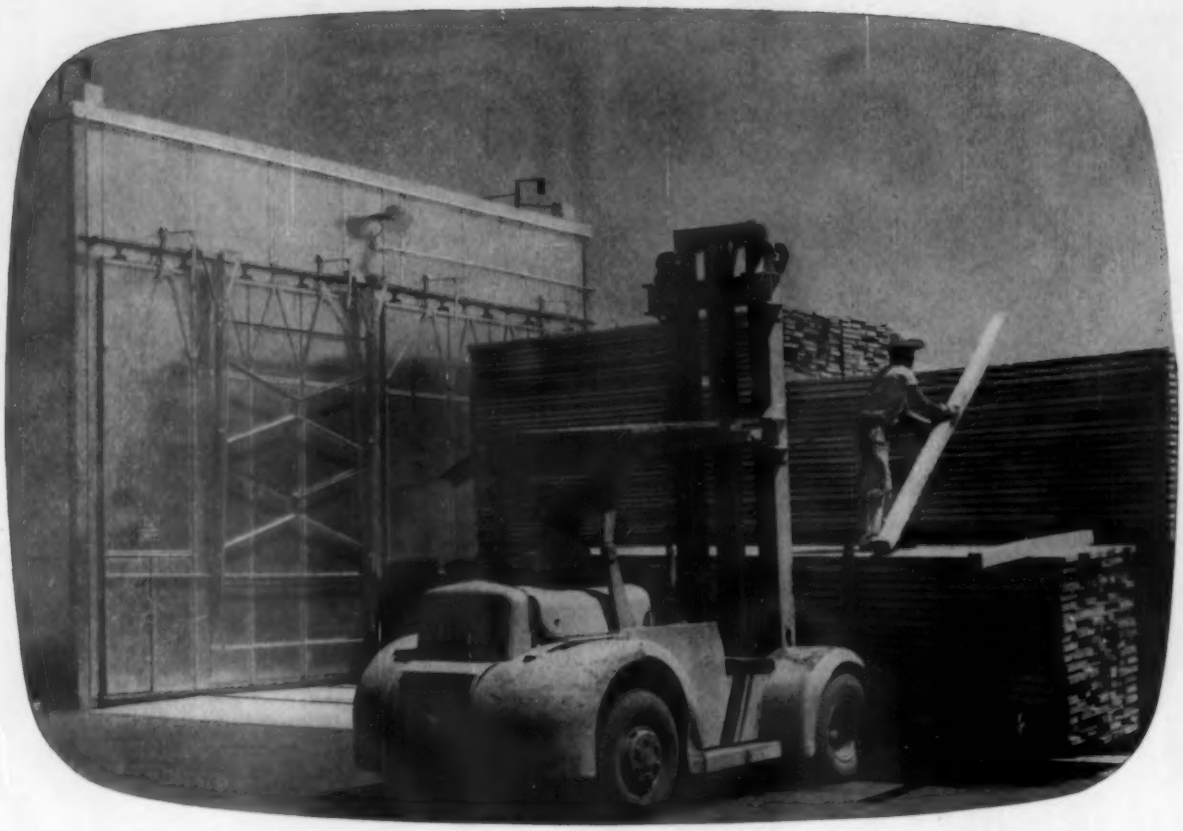
Diamond's new name adds new sparkle to a famous reputation!

Our new name—Diamond National—is the result of Diamond Gardner's recent merger with United States Printing and Lithograph Company. This merger adds a whole new facet to the services previously offered by Diamond. We are proud of our new name. It represents an important part of our plan to help *you*, too, grow for the future.

diamond national

Three Sales Offices serve all your lumber needs:

SPOKANE, WASHINGTON	RED BLUFF, CALIFORNIA	CHICO, CALIFORNIA
P. O. BOX 1483	P. O. BOX "D"	P. O. BOX 1037
H. E. CLAYCOMB,	GLEN L. DIETZ,	T. S. TURNER,
Sales Manager	*Sales Manager*	*Sales Manager*

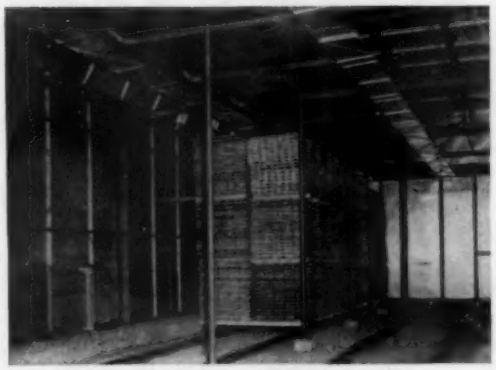


For one source . . . one responsibility—specify STANDARD

● Specify Standard and you eliminate the problems that go with divided responsibility. Standard can design, supply and supervise *complete* dry kiln installations, including direct gas-fired and package kilns. Standard's "one source" service also includes fan systems, heating units, dry kiln doors, kiln trucks, ventilators, controls for fully automatic operation, lumber stackers, power transfer cars, lumber lifts, moisture registers and other equipment.

For buildings alone, count on Standard, too. Standard's insulated aluminum panel buildings are pre-engineered. They save time and prevent unforeseen erection costs when semi-skilled or unskilled labor is supervised by Standard's engineers.

No matter what your dry kiln requirements, write today for complete information. Standard can furnish the entire job . . . and stand squarely behind it with 72 years of engineering-manufacturing specialization in dry kiln production and installation.



Interior view of partially loaded double-track Standard kiln.

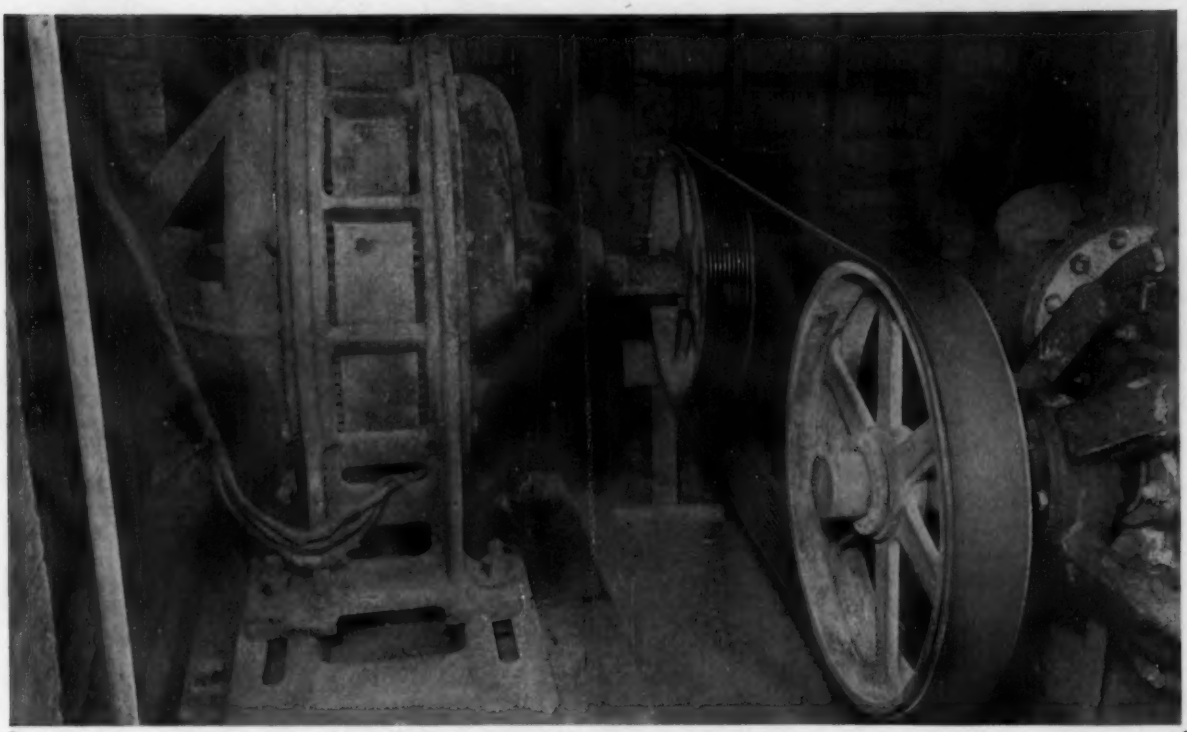
STANDARD DRY KILN COMPANY

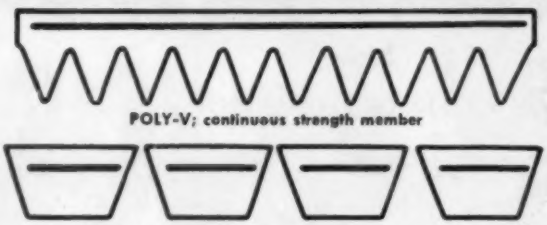
P.O BOX 21008 • INDIANAPOLIS 21, INDIANA

WESTERN STATES AREA

Irvington MACHINE WORKS

1808 N. E. 7th Ave. • Portland 12, Oregon • Atlantic 4-1187





"MORE USE PER DOLLAR"

Poly-V Belt is a single unit with even, uniform pull. Uninterrupted strength member gives much higher hp capacity per inch of drive width. No belt drive delivers as much power in the same space as Poly-V!

THIS R/M POLY-V® DRIVE OUTLASTED V-BELTS 8-1!

V-belts were replaced every six months on this gas pump drive in a southern chemical plant—until the company converted to R/M's patented Poly-V Drive. The single Poly-V Belt pictured above has been in operation for over 4 years on a barium process operation. Four years for the R/M Poly-V Drive versus 6 months for an ordinary V-belt drive! The savings and advantages to production are obvious.

R/M Poly-V Drive solves difficult drive problems wherever heavy duty power transmission is required. Single unit design permits *narrower* Poly-V sheaves to deliver *equal* power in a much smaller space or much *more* power in the same space as a V-belt drive! The drive runs smoother because there's no sinking of belt in sheave grooves. Belt speed ratios remain constant from *no* load to *full* load for uniform power delivery—with less wear on belts and sheaves. V-belt "length matching" problems are completely eliminated . . . and just two belt cross sections meet every heavy duty requirement. Let an R/M Distributor show you other advantages of converting to R/M Poly-V Drive. Write for Bulletin M141.

- **More Power—Less Space**
- **Eliminates "Matching" Problems**
- **Maintains Groove Shape**
- **Assures Constant Speed Ratios**
- **Longer Belt and Sheave Life**
- **Cooler, Smoother Running**

RM1010

When You Change Drives, Convert to Poly-V and Be Sure!

RAYBESTOS-MANHATTAN, INC.

MANHATTAN RUBBER DIVISION, PASSAIC, NEW JERSEY

RM

ENGINEERED RUBBER PRODUCTS ... MORE USE PER DOLLAR

JEDDELOH BROS. GOLD HILL, OREGON • Phone ULrick 5-1316

Sweed MILLS, INC.

Sweed GANG SAW

...the accurate, high recovery saw—for dimensional lumber.

- RUGGED, all Steel construction
- WELL balanced, SMOOTH running — MINIMIZES vibration
- MINIMUM foundation requirements
- BUILT-IN accuracy — REDUCES waste
- UTMOST simplicity — EASILY maintained
- PROMPT availability of REPAIR PARTS
- AMERICAN made—for AMERICAN PRODUCTION demands
- QUALITY components and QUALITY workmanship make the SWEED GANG SAW a QUALITY product

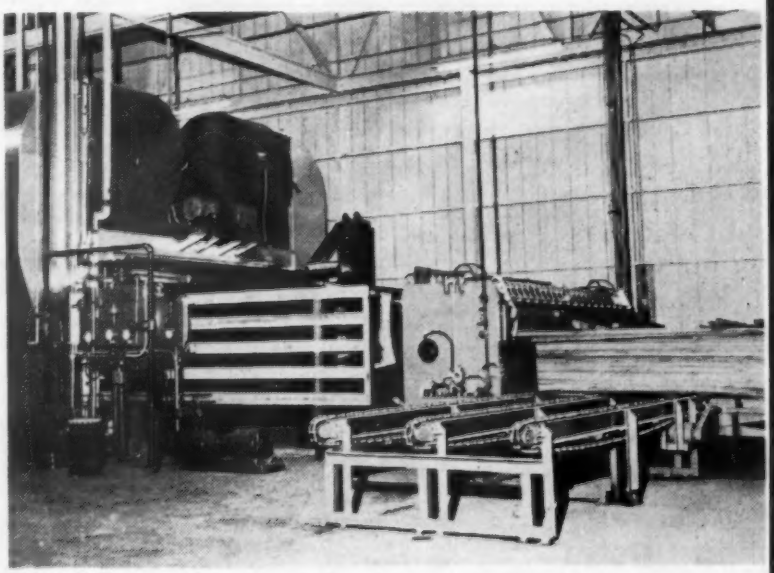
Sweed INVITES YOU TO LOOK AT ITS GROWING LINE . . .

Sweed MILLS
is gratified
to have its

SPEED•FEED
...the cam activated feeder adaptable to any veneer dryer

installed at the

HULT TIMBER CO.
Junction City, Oregon



Write for Sweed brochures today . . .

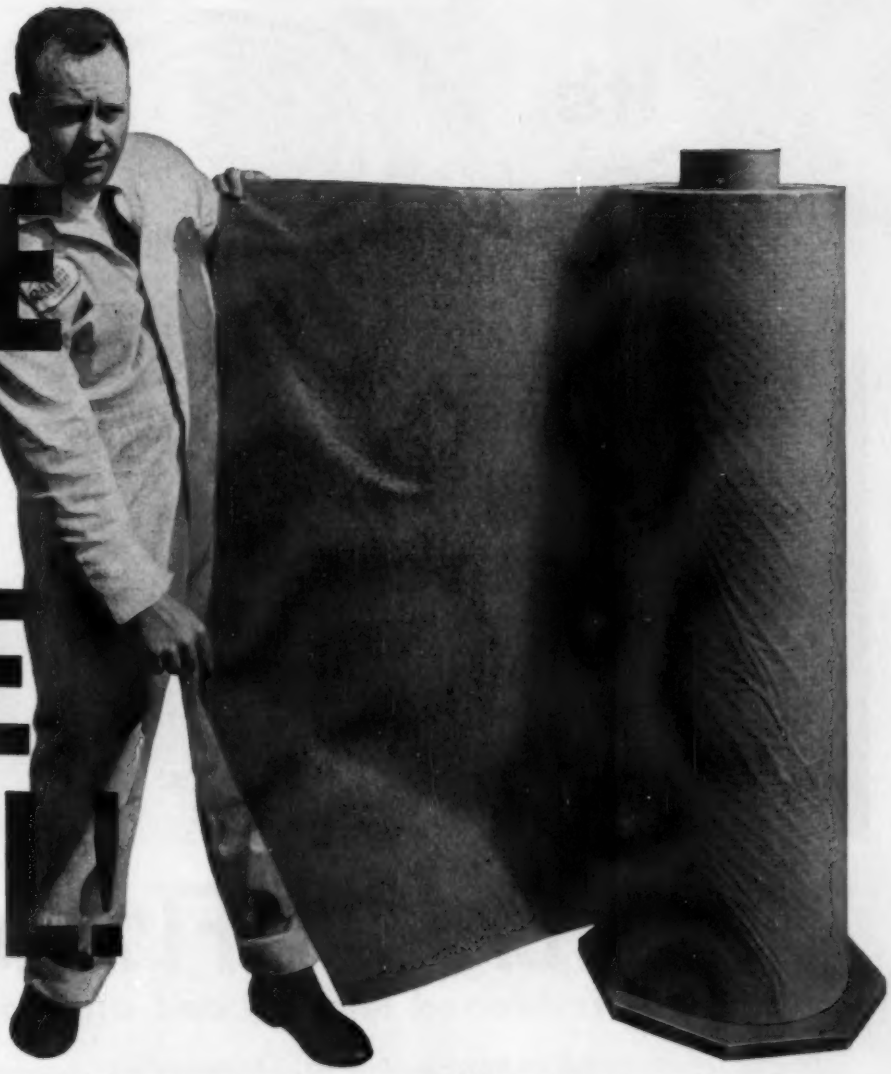
Sales Representative

GOLD HILL, OREGON • Phone ULrick 5-1145 PORTLAND, OREGON

National MACHINERY SALES INC.

NOW—FROM REICHHOLD...

GLUE BY THE ROLL!



NEW WAY TO MAKE PLYWOOD WITHOUT GLUE ROOMS AND GLUE SPREADERS

REICHHOLD PLYOPHEN 2000-PGL makes it possible! In effect, it is glue-by-the-roll — a cellulose carrier sheet impregnated with phenolic resin. You simply cut the sheet to size as you would plastic overlay materials. Or, use the continuous sheet as supplied, for "automating" your plywood layup. In hot pressing, the resin remains on the glue line, provides maximum efficiency with minimum waste: eliminates uneven glue spreads, glue wipes and bleed-through.

PGL will tolerate higher moisture content veneers, and hence help solve the problem of blistering.

REICHHOLD PLYOPHEN 2000-PGL has been successfully tested in a wide variety of important bonding applications. It is faster curing and more economical. Available in 38″, 50″ and 62″ widths.

For further information, send for Bulletin PLY-48. *Reichhold Chemicals, Inc., RCI Building, White Plains, N.Y.*

With PLYOPHEN 2000-PGL, panels can be pre-assembled, then pressed when convenient.

Creative Chemistry . . . Your Partner in Progress

REICHHOLD

Synthetic Resins • Chemical Colors • Industrial Adhesives • Phenol
Hydrochloric Acid • Formaldehyde • Phthalic Anhydride
Maleic Anhydride • Ortho-Phenylphenol • Sodium Sulfite
Pentaerythritol • Pentachlorophenol • Sodium Pentachlorophenate
Sulfuric Acid • Methanol

REICHHOLD CHEMICALS, INC.,
RCI BUILDING, WHITE PLAINS, N. Y.

...exclusive CARY-LIFT feature eliminates costly, old-fashioned loading and unloading by hand

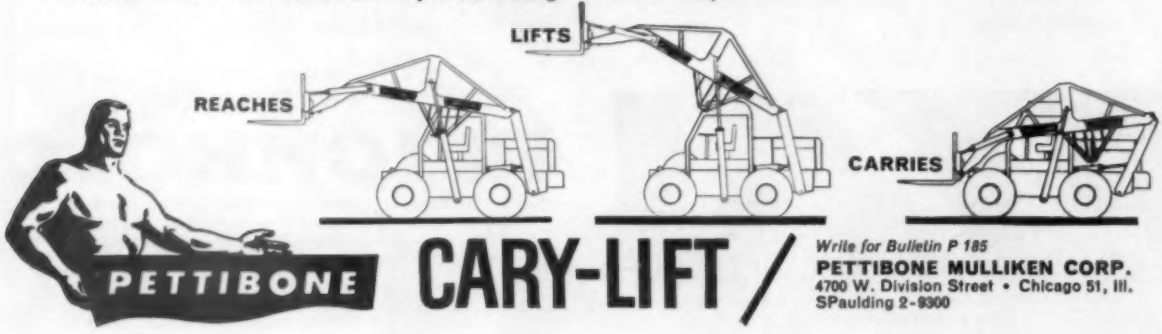
Cary-Lift not only performs the usual loader functions of carrying and lifting loads, but adds the *exclusive* BIG REACH — the patented 4 ft. hydraulic *forward reach* at *all* heights! It picks the load off the ground, carries it, then positions it high up and over on piles — no hands! And Cary-Lift comes in models that will handle capacities from 6000 to 60,000 lbs., depending on your requirements.

In the kilns, the high forward reach permits stacking to capacity in fast time . . . with *no hand labor*. Rail cars and trucks can be loaded from one side—a great time-saving feature. Also, the long forward reach provides ample clearance between the Cary-Lift and the side of a truck or rail car to prevent damage to equipment, while adding safety for the operator.

Powerful 4 wheel drive and high flotation tires guarantee continuous operation the year around, regardless of terrain or weather.

Cary-Lift does so many jobs around the yard that it is recognized as the most versatile all-purpose loader in the lumbering industry today. Owners find that *one* Cary-Lift *easily replaces* as many as *three* special-purpose machines—a big saving in equipment investment!

It will pay you to ask experienced Pettibone engineers to make a survey of your operation. They will show you how Cary-Lift can increase your production and profits. Write today!



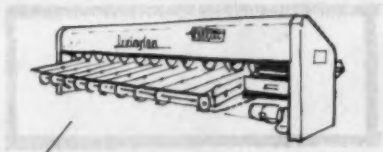
CARY-LIFT

Write for Bulletin P 185

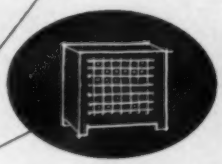
PETTIBONE MULLIKEN CORP.
4700 W. Division Street • Chicago 51, Ill.
SPaulding 2-9300

The QUALITY in all IRVINGTON EQUIPMENT

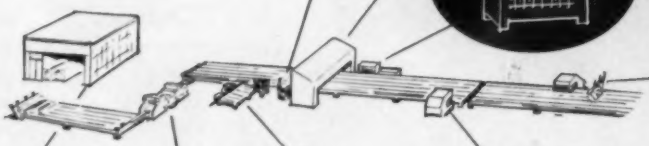
UNIT AND PLANT AUTOMATION



END-SURFACING

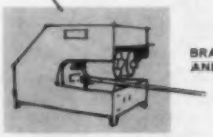


SYSTEMS CONTROL

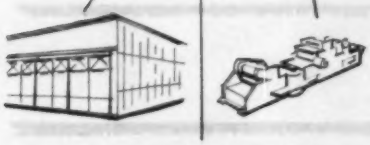


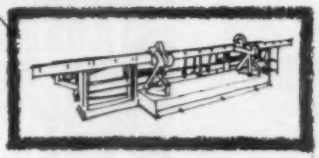
FACE GRADE PRINTING

including



BRAND IDENTIFICATION AND PROMOTION





GRADE AND RETRIMMING

Standard Dry Kilns and S. A. Woods Planer-Matchers

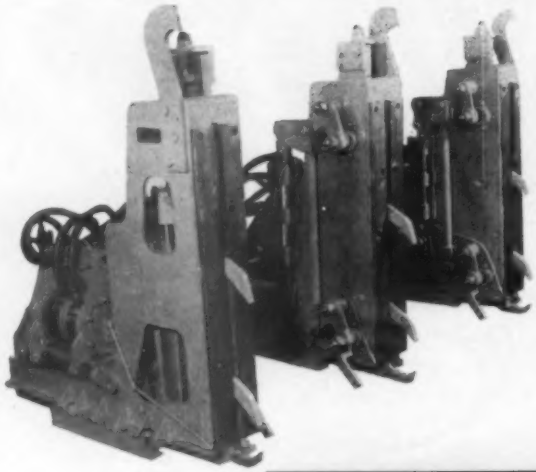
makes the

PROFITABLE Irvington DIFFERENCE

Since 1907, Irvington has searched out new methods and improved equipment to help the lumber industry operate more profitably. Irvington quality and engineering originality are available in a complete line of equipment for sawmill trimming, sorting, kiln drying, planing, end-surfacing, end-printing and waxing, face grade printing, and Irvington Automatic Control.

TWO PLANTS: 8205 S.W. Hunziker, Portland 23, Oregon • 3 Colfax N.E., Grand Rapids 5, Michigan

Prineville F. D. Knees . . . .



installed at Ellingson Timber Company, Izee Mill

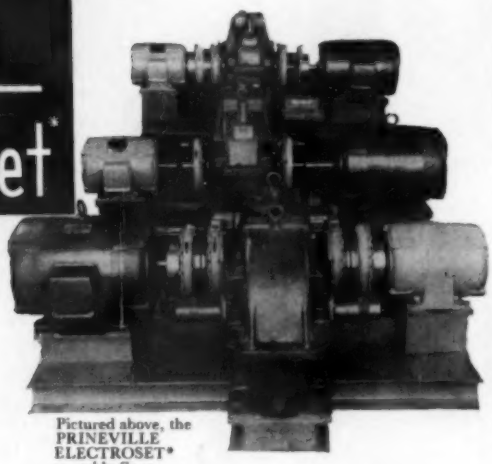
Says Sig Ellingson:

"The new knees have made this carriage the best in any of our mills. . . ."

Mr. "Chappo,"
superintendent of the Izee Mill:

"These knees are the best available to the industry without exception. I would recommend them to anybody . . ."

Plus Prineville Electro-Set*



Pictured above, the PRINEVILLE ELECTROSET* assembly floor

Recently installed at Hudspeth Pine, Prineville

Says Don Miller,
asst. mgr. of Hudspeth Pine:

"We replaced another make of automatic carriage setworks with the PRINEVILLE ELECTRO-SET. Now we are getting exceptionally well-manufactured lumber. We highly recommend the PRINEVILLE ELECTRO-SET to all sawmill operators."

. . . and a New Big Plus

the all new Pritonic Fully Automatic Sawguide Control

It's foolproof . . . cannot come down into the log.

* *Patented under U. S. Patent No. 2739626*

Prineville MACHINE & SUPPLY COMPANY

Phone—HI 7-6225 PRINEVILLE, OREGON P. O. Box 85

MISSING: ONE GLUE LINE

Now you see it, now you don't. The difference? **MELURAC 260°** melamine-urea aplicer glue, containing a small quantity of nutshell flour—ideal for light or dark veneers. Scorching risks are eliminated, too, because Melurac 260 cures faster at lower temperatures. The catalyst is incorporated in Melurac 260. Add only water to spread smoothly, evenly, three or more days' assembly time. Or try **MELURAC 255,** completely non-staining. Just add hardener and water. Whichever you use, expect *invisibly* perfect results.

CYANAMID

AMERICAN CYANAMID COMPANY
PLASTICS AND RESINS DIVISION
30 ROCKEFELLER PLAZA, NEW YORK 20, NEW YORK • OFFICES IN: CHARLOTTE • CHICAGO CINCINNATI • CLEVELAND • DALLAS • DETROIT LOS ANGELES • MINNEAPOLIS • NEW YORK OAKLAND • PHILADELPHIA • ST. LOUIS • SEATTLE IN CANADA: CYANAMID OF CANADA LIMITED, OFFICES IN: MONTREAL AND TORONTO

Serving the Industry Since 1852

It's Revolutionary!

A-480M Series DIAGONAL PLANER and MATCHER

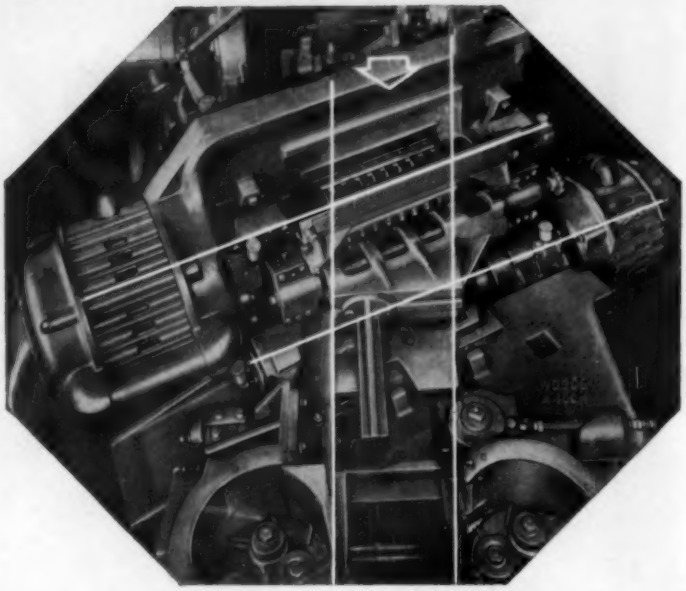
prevents

End-Sniping

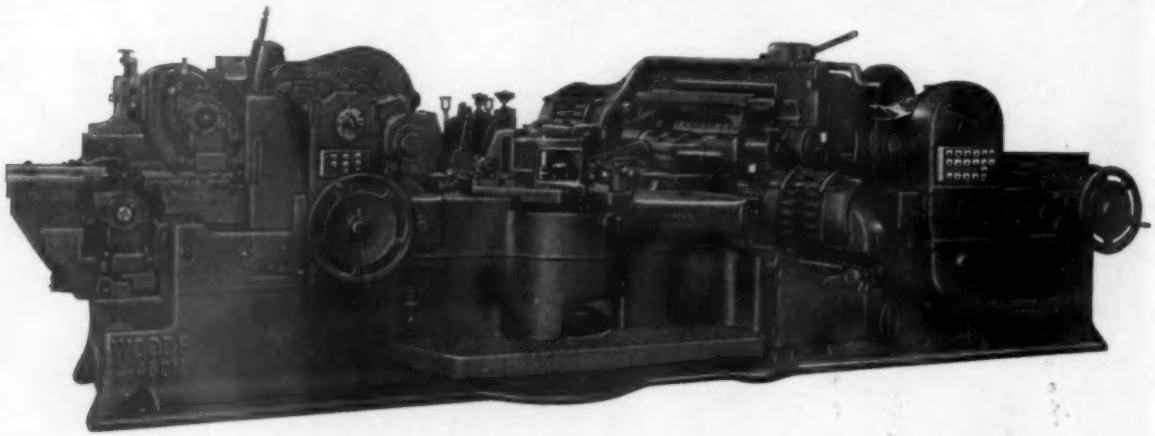
Torn Grain

Loosening of Knots

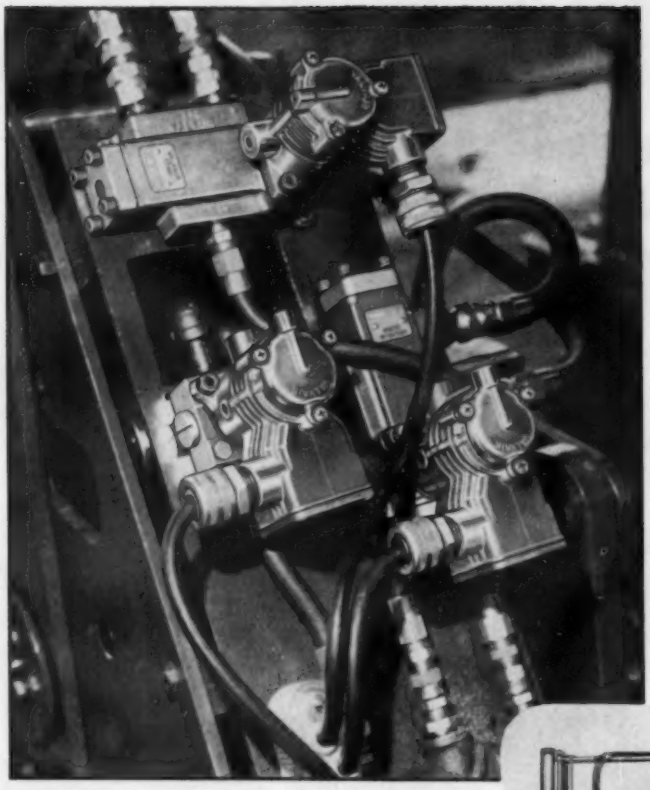
The Top and Bottom Cutterhead Units are mounted diagonally to the main Guide of the machine, presenting a sheer cut to the stock under Top Cylinder and over Bottom Cylinder which eliminates sniped ends. It also gives a smoother finish around knots and cross grain. Less power is needed to feed the stock. Less lead is required in guide as angle cutterheads hold stock against guide face.



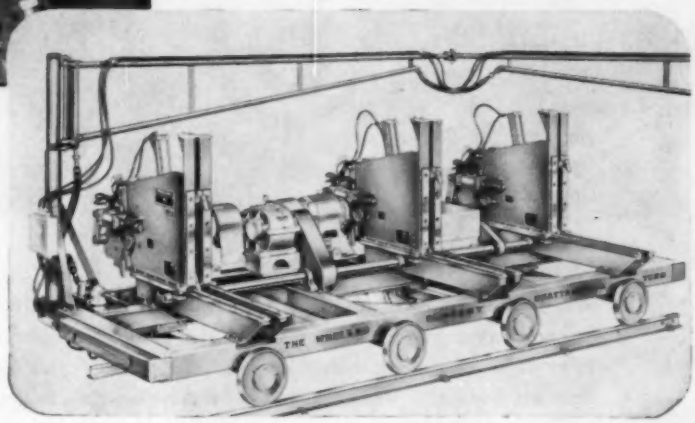
Investigate now how this improved patented method of sizing lumber can improve your margin of profit on every hour's run. Write today for the A-480 M Series booklets.



S. A. WOODS MACHINE CO.
27 DAMRELL STREET
BOSTON 27, MASS.



"We've found Valvair SPEED KING control valves to be extremely reliable and to require practically no maintenance"



Valvair SPEED KING solenoid pilot-operated valves control dogging and tapering cylinders on the Wheland Company's new Series 200 carriage. Completely sealed valve enclosures prevent entry of sawdust or moisture to provide multi-million cycle dependability . . . straight-through construction of the valves permits quick, "drop-in" replacement of packers, without removing the valves from the carriage, when maintenance finally is needed.

These are only two of the reasons given by The Wheland Company, Chattanooga, Tennessee, for using Valvair SPEED KINGs on their new Series 200 tong dog carriages.

Dependability of key components assures uninterrupted production . . . increased profits. Insist on Valvair SPEED KING quality, whether you're building or buying new machinery, or up-dating your mill by converting to air-operated equipment. Call your nearby Valvair field engineer . . . he'll be pleased to make recommendations for your applications.

Offices in principal cities

For more information on SPEED KING valves, write for Bulletin SK-100. Address Dept. LU-360, Valvair Corporation, Akron 11, Ohio.

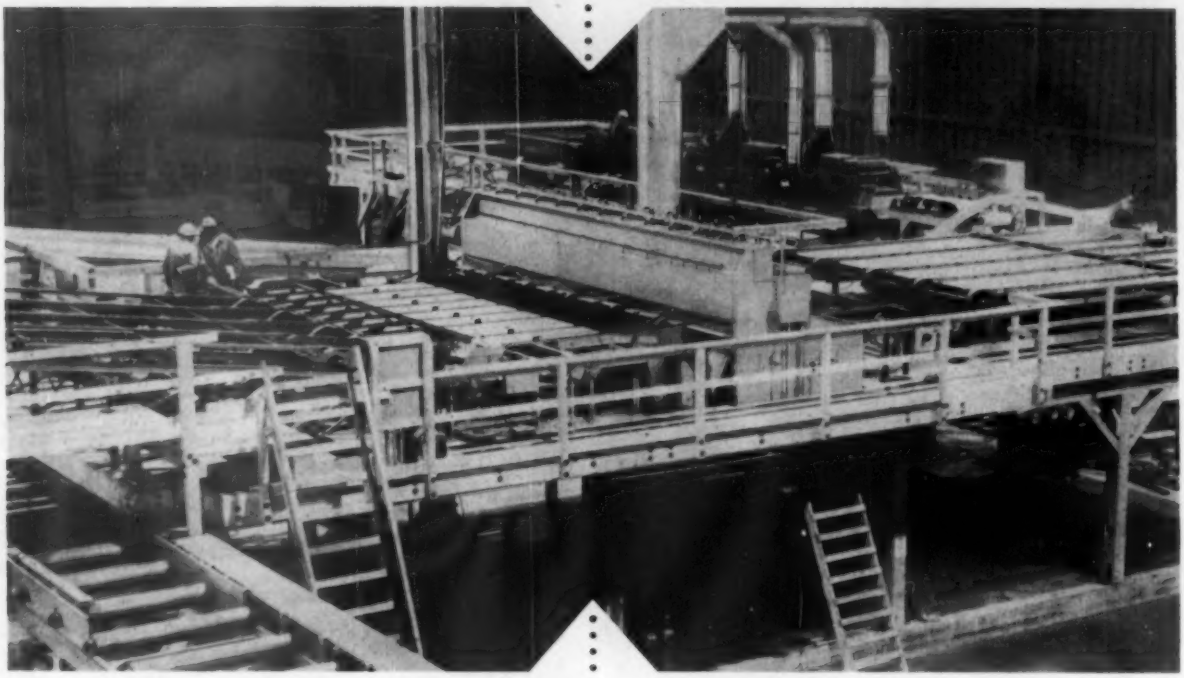
Valvair AKRON 11, OHIO

Other INDUSTRIAL DIVISIONS of IBEC: The Sinclair-Collins Valve Co. The Bellows Co., Akron, Ohio • V. D. Anderson Co., Cleveland, Ohio.

8024

There's new profit in manufacturing methods

BROOKS-SCANLON INSTALLATION AT BEND, OREGON



Here is the first fully automatic random-length end trimmer that prints and waxes both ends of the boards while they are in continuous forward motion. It's fully automatic. ● Here is speed! Here is *profitable* recovery because every board is trimmed to its maximum marketable length. With this PORTLAND IRON WORKS installation there is no slow-down, no shifting of boards. ● For the newest ideas in low-cost lumber manufacturing, call us. We'd be pleased to help you plan for maximum recovery of your boards and dimensions. Our experience can mean new profits for you.

WRITE FOR DETAILED LITERATURE

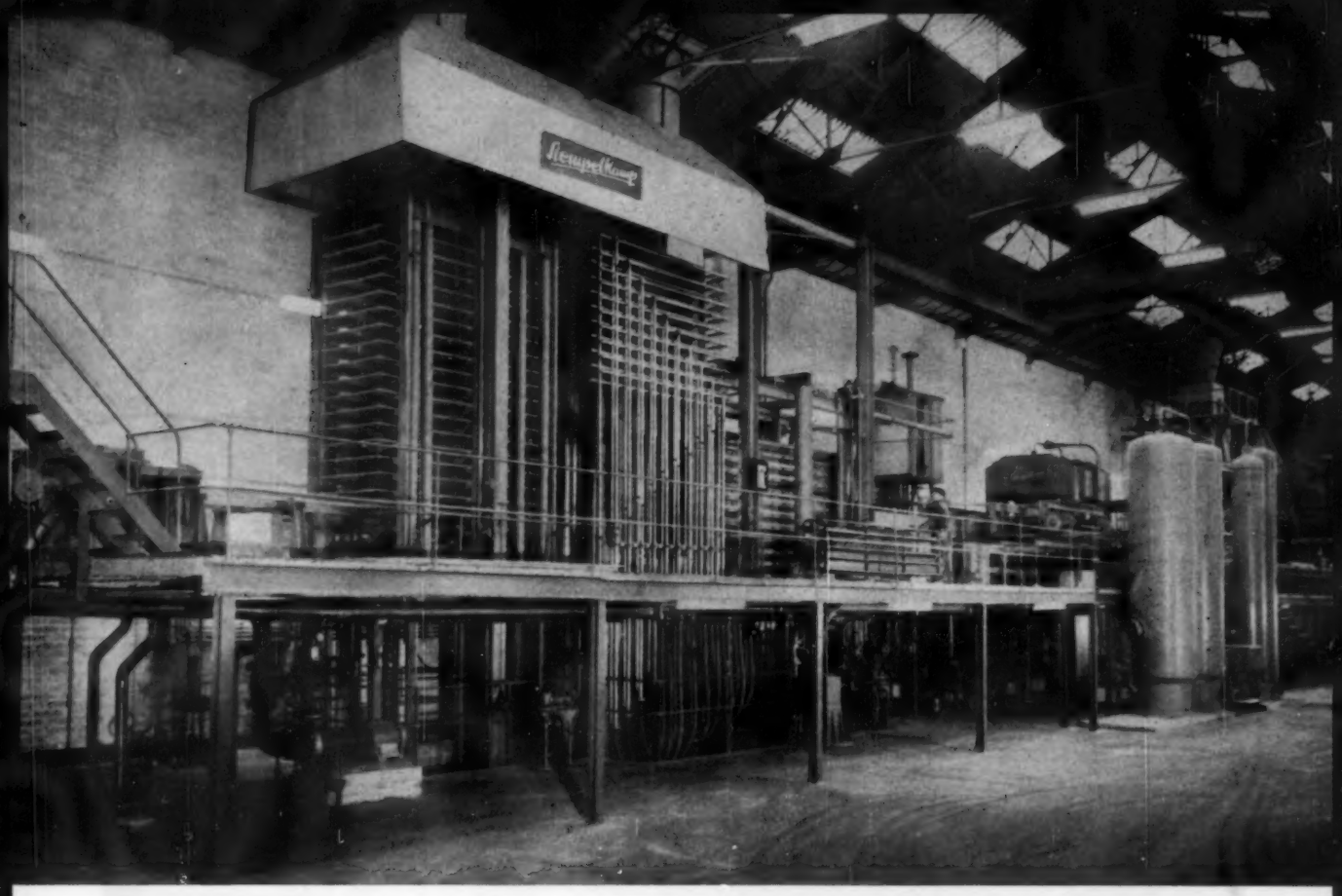
PORTLAND IRON WORKS INCORPORATED

1335 N.W. Northrup Street
Portland 9, Oregon
CApitol 7-1107
Teletype PD565

experience is our best designer

PORTLAND IRON WORKS · PORTLAND OREGON ·

engineers
machinists
founders
established 1882



Chip Board and Particle Board Press installation

suitable for:

- All Types of applicable raw materials
- All Manufacturing processes
- All Stages of automation
- All required capacities

Siempelkamp

G. Siempelkamp & Co. · Maschinenfabrik · Krefeld

Telegramme: siempelcampco, Krefeld · Telefon: 28676 · Telex: 0853811

Minimum Upkeep...

Maximum Payloads!

Get this profitmaking combination now with

AUTOCAR

"On long hauls of lumber and plywood or on hauling logs out of the mountains, I have found Autocar a top performance truck," says Pete Pettit, of Fortuna, California... That's a common reaction from veteran Autocar owners in the forest industries for this is where Autocar's rugged features make the big difference.

Over primitive spur roads, mainline roads and highways alike, Autocar consistently hauls maximum loads under all weather conditions. Powered with the finest diesel engines available, Autocar uses the most efficient combination of components manufactured.

Add it up for yourself... bigger payloads, low maintenance, top performance... and you get *more profit* on your hauling operation. Get all the facts on this money-making motor truck from your Autocar representative today!

When you get down to factual comparisons your logical choice is...

Autocar
"World's Finest"

Division of
White Motor Company
Exton, Pa.

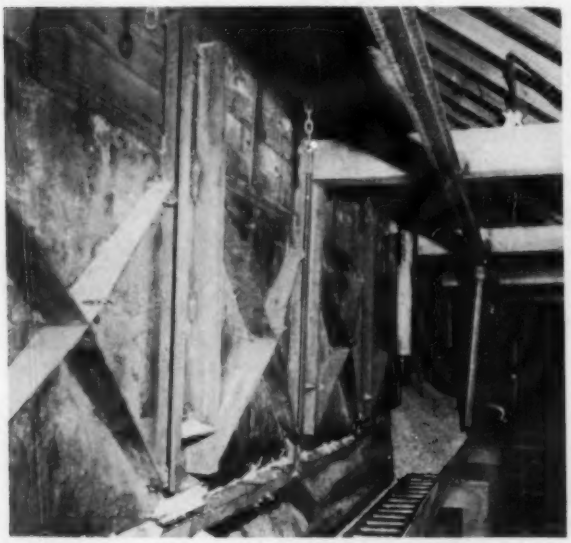
...the forest industry's proved cost-saving diesel

Job Saver

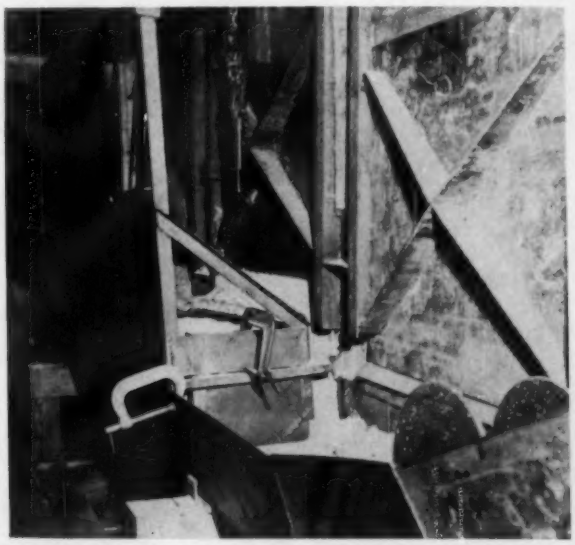
Flow of refuse to boiler house is kept constant in this hand-operated system at Hughes Bros. Lumber Co., Foresthill, Calif.

1 Head filer Al Thompson here demonstrates the key to the system—a modified binder, with two hooks and lengthened by welding in added sections. Greater leverage is gained. Downward pull on the binder lifts the door and holds it in position. The binder is suspended from the overhead chain, where the top hook is fastened on a link of chain. The bottom hook is hooked onto a heavy bolt welded to the door's cross braces. The door slides on skate rolls. Mr. Thompson is reaching across a mobile backstop, a part of the system.

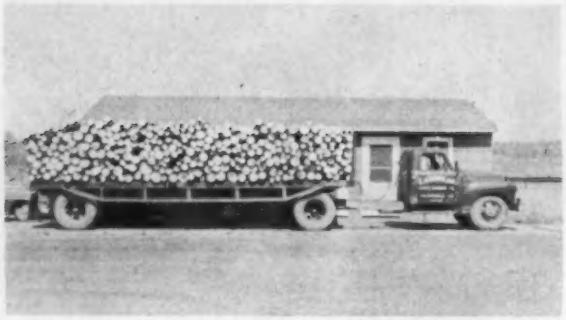
2 Locked in position, the binder holds the door at desired level. Skate rolls are attached at four corners of the 40x32-inch door. These ride inside angle-iron tracks. Slanting upright in foreground is one of two uprights which brace the 3/16-inch steel backstop. The backstop is suspended from an I-beam track and moves on skate rolls running on the I-beam. Flow is from two gates at a time, normally.



3 The I-beam track is more easily seen in this photograph. So also are the suspended chains and the manner of door construction. The upright bars at the top-centers of the doors were installed initially as a part of a control system, but were not used after the current system was devised. There are 10 doors in the fuel house.



4 Two large C-clamps are used on the mobile backstop. One holds a drop-in steel gate which levels the fuel as it settled onto the chain. The other holds the backstop itself in desired position. The wheels in right foreground hold the feed chain flat. Peep holes are bored all along the fuel house wall between the door frames. ■■



1 Pulpwood is quickly unloaded at the wood room by a diesel electric revolving crane, left. Unloading of trucks takes about 10 minutes. Trucks are weighed (above) before unloading. The grapple on the crane takes a ¾-cord bite of the 8-foot long aspen logs. It rides rails atop a center well and one side of a 200-foot long pond which extends into the wood room building itself.

Logs to Wood Fiber . . . The Result is Nu-Wood

Buildings of Wood Conversion Co. in Cloquet, Minn., span almost a mile from end to end. Beyond the mill, the wood yard extends another half mile. By rail and by truck, from farm woodlots and other sources, comes pulpwood—70,000 cords a year—to be transformed, first into fiber, then into Nu-Wood and variety of other Wood Conversion products.

The manufacturing process is detailed in pictures on these pages.

Wood Conversion's operation is largely the result of a changing forest economy.

Cloquet was once a sawmill town cutting lumber from the big pines that dominated the state's forests. The trees were cut out or lost to fire and the new growth was not suitable for sawmilling.

New methods were needed to utilize available trees. Research pointed the way . . . products from wood using fiber.

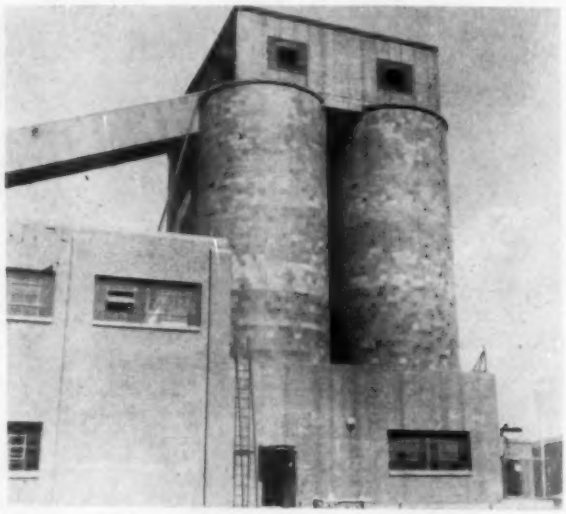
Research that led to establishment of Wood Conversion continues to be important.

In a special laboratory near the Nu-Wood finishing department, samples of Nu-Wood are tested regularly for such properties as strength, weight, moisture content, color match and light reflection.

These tests assure that Nu-Wood products are always uniform, regardless of date of manufacture. Inspectors also scrutinize every piece of Nu-Wood before it is packaged.

Nu-Wood is versatile. Used as an interior finish it decorates, insulates and hushes noises. As an insulating sheathing, it helps to reduce building costs and makes exterior walls strong and weather-proof.

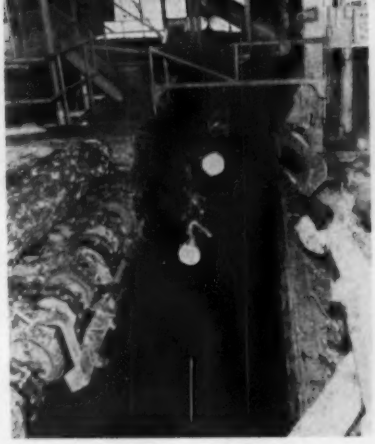
Wood Conversion also manufactures Balsam-Wood and Tufflex at separate plants on the Cloquet site.



5 Proper size chips go to four 60-ton chip silos, such as this. Silos are filled by conveyors which can be shifted to fill any one of the silos.

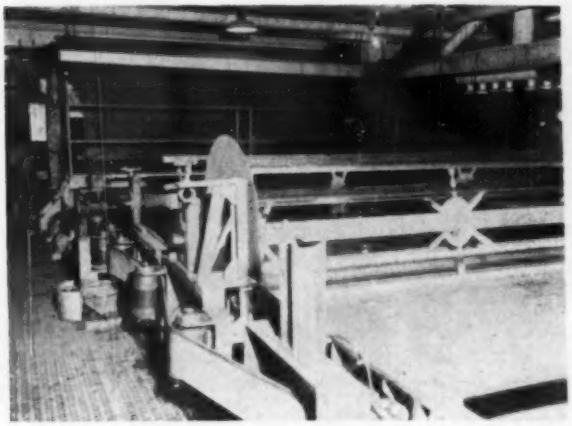
8 Trimmed boards move into one of two steam-heated dryers where they are subjected to 270 degree heat. Controlled by an electric switch, boards are stacked automatically on dryer shelves. Dryer at left has eight decks, is eight feet wide, 460 feet long. Unit at right has 10 decks, is 12x250 feet.

2 This view is inside the wood building. The jack ladder will carry the aspen and pine logs into the mill proper.

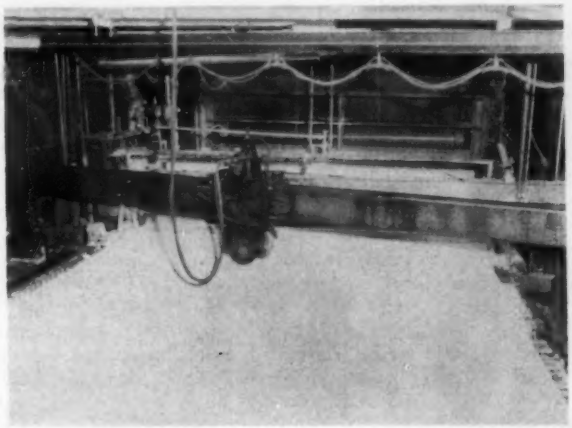


3 At top of jackladder, logs fall onto 48-inch belt which carries them to 84-inch gravity feed chipper. Oversize logs will be split.

4 Chips are moved by conveyor to these four shaker screens. Oversized chips are returned for further reduction, fines go to boiler.



6 Chips are cooked with water and chemicals, then reduced to fibers in refiners before they come to this mat forming station. From this slurry end fibrous mat passes between pressure rolls which squeeze out moisture.



7 As the board mat emerges from the forming machine this traveling cutoff saw cuts the 12-foot wide wet board into 18-foot lengths. After trimming the boards will be 16 feet long. Trimmed boards are ready for drying.

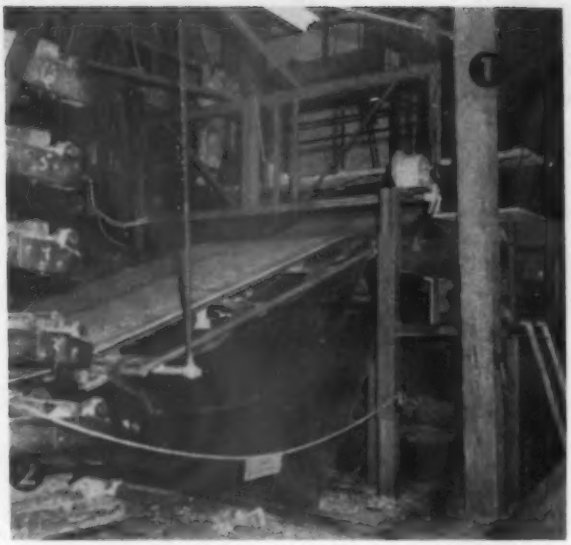
9 Dried boards are cut into final product by trim saw. Boards make right angle turn between two sets of saws. From here, treatment varies: tile boards are coated and possibly perforated, wall paneling goes to coaters for decorator colors, insulation sheathing goes to the warehouse.

Equipment

DOWNINGTOWN (BLACK & CLAWSON) FOURDRINIER; AMERICAN defibrators and continuous digester; SPROUT-WALDRON refiners; BAUER refiners; DILTS refiners; COE dryers and cutoff saws.

MEREEN-JOHNSON trim saws; NASH vacuum pumps; EVANS ROTABELTS; ZAGAR tool perforators; CLARK fork lifts; AMERICAN diesel electric crane.

CARTHAGE chipper, TYLER Tyrock shaker screens; WESTINGHOUSE forming machine drives. ■■



New automatic tipple by Redco delivers veneer to empty tray. The lathe operator (top center of picture) can tell which trays are full and which are empty by panel of signal lights (1). Operator can switch over to manual in case he wants to fill a partial tray, such as at the end of a cut or in case of a jam-up. The "apron" which leads from the lathe down to the open floor conveyor has been a big help in keeping this part of the green end much cleaner than was possible previously when scrap went over the tipple before dropping into conveyor (2). Veneer is broken with an air blast.

Tipple is raised and lowered by electric motor which drives chain over sprocket (arrow).

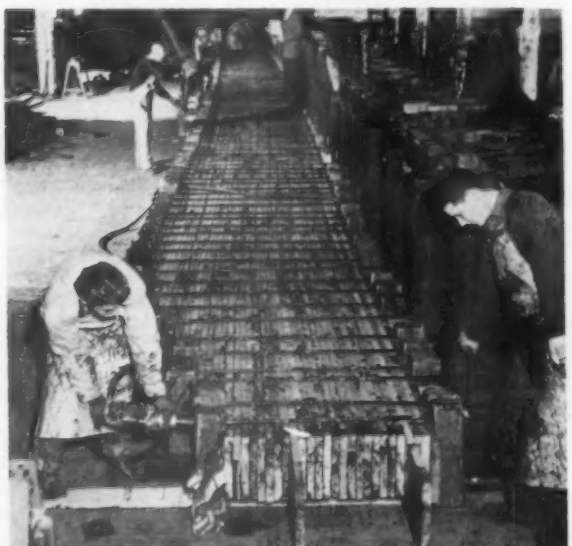
Automatic Tipple Upgrades Green End Operation

Many benefits are being enjoyed at North Pacific Plywood, Inc., Tacoma, Wash., as a result of installation of a new Redco automatic tipple and other improvements on the tray and clipper system. George D. Jaynes is manager and superintendent.

A major advantage is a much improved veneer cleanup area between the lathe and the trays. An apron has been installed to handle all the scrap and round-up veneer and slide it into a large floor conveyor.

According to Ingvar Berg, foreman, the entire green end operation is smoother now. There is no time lag due to human error in filling trays or failing to observe trays. Machinery is always ready to function and much time is saved by this factor.

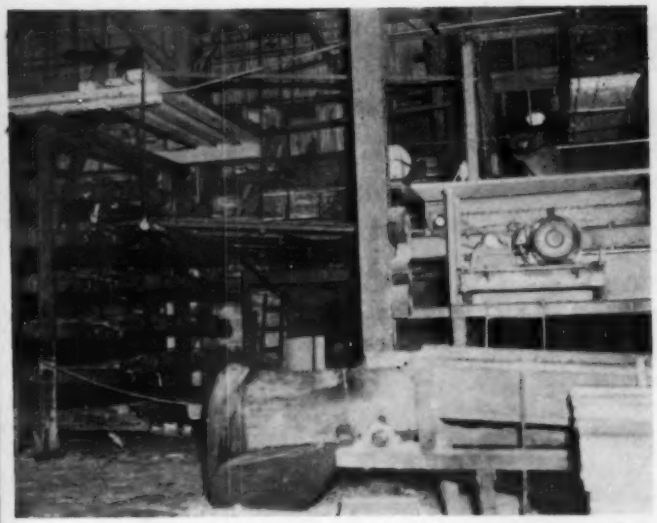
Green end efficiency is increased by using trays at optimum efficiency. The veneer also stays in better condition between lathe and clipper, with less break up. The demands on the lathe operator to handle this extra responsibility are shifted mainly to the automatic equipment so that he actually has taken very little more work.

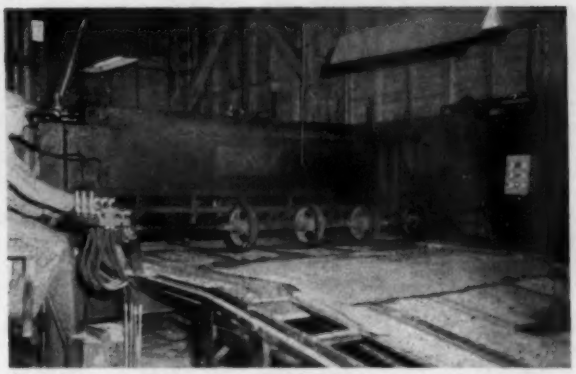


INDIVIDUAL BOARDS are glued together, end to end. A pressure of 110 pounds per square inch is applied throughout the length of the beam during the pressing period.

Giant Laminated Beam

SHIPPING WAS A PROBLEM. The 106-foot-long beam was wrapped in a polyethelene envelope, wrapped in burlap and lifted by mobile crane onto a railroad car with an idler car on each end. Because the beam was too long to be carried by road through the Calgary underpass, it had to be off-loaded at a spur, then loaded onto a pole trailer and trucked to the building site.





Simpler maintenance results from change in clipper operation. Operator feeds veneer to the clipper by engaging the clutch on the tray drive. He does it with the use of air valves for controls; these are located just in front of him in this view. Lights at the far right tell him which trays are full.

An electrical problem faced in changing over to automatic tipple and tray system was that the lathe has a clutch which can engage the DC lathe drive motor at high speed. Since the tray system is integrally tied in with the lathe, it means the DC tray motor had to bring the trays up to high speed almost instantaneously. The variable speed drive in the 10-hp motor and an AC-DC motor generator set were adjusted to respond as fast as the lathe required. The electric drive for the veneer trays is a Reliance V-S variable speed 10-hp motor.

New rolls were installed along the six trays of 130-foot length to hold up the belts. Previously belts were supported by riders. Now there is little chance for stray veneer to foul up belts. Clean-up is simplified. ■■

Produced in Canada

Fabrication of laminated beams has made rapid progress in British Columbia in recent years, and a beam 106-foot, 1 7/6 inch long was recently produced at Glulam Products, Ltd., near New Westminster. Width of the beam was 11 inches and depth 56¼ inches. Weight was 16,885 pounds, or about 7,515 pounds less than the weight of a steel beam of comparable strength.

This beam is the longest in these dimensions ever produced in Canada. It was designed to act as the main roof ridge or "backbone" of a new church in Calgary, Alta. To compensate against sagging under its own tremendous weight the beam was fabricated with a special built-in camber. No further fabrication was required once the beam reached the building site, all the necessary finishing and drilling having been completed at the Glulam plant.

Forty laminations of Douglas fir were used in the production of the beam—9,649 board feet of lumber, sufficient to build a modern home. The whole operation, including assembly, bonding, clamping, heat treatment, cooling, finishing and drilling occupied less than 48 hours. The actual bonding or gluing took just two hours and involved a crew of 16 men. A total of 767 pounds of resorcinal waterproof glue was used.

Wes Hall, general manager of Glulam, Ltd., who has been in this type of business for 20 years, says his basic plant procedure doesn't vary materially from other qualified plants producing similar material. The first step in actual production begins in the lumber lay-up room where the wood is inspected, graded and checked for moisture. Lumber is ordered from the sawmill with a 10% moisture content as a basic requirement.

The chosen lumber is transported to the scarfing machine where it receives a flat 1:2 slope scarf, making it possible to glue the individual boards together, end to end, in order to achieve a continuous laminate for the entire length of the glued member.

The laminate is then transported into the gluing area where it is laid up in the jigs as either a straight member or an arch. Interior temperature readings are made and tabulated through use of thermocouple wires imbedded in the center portion of the glued member. Ordinarily, a temperature of 90 degrees inner glueline is maintained for eight hours to complete the cure.

After curing, the beam passes through the planer, framing line and final finishing department. ■■

California Plant Produces Veneer From Madrone

Madrone now totals 50 per cent of the one million surface feet of veneer a month being produced at Coastal Veneers, Inc., Crescent City. Except for a small amount of oak, all the remainder is Douglas fir. The madrone ultimately is overlaid on Douglas fir plywood and produces a rich looking, durable surface which finishes well.

All madrone from the Crescent City plant is shipped to Portland, Ore., where it is spliced and then made up into panels 50'x98-inch, 50'x86-inch and 50'x74-inch. Of the Douglas fir veneer, more than 80% is shipped direct to plywood mills.

Coastal Veneers saws cants from round logs purchased on the open market. Formerly, sawing was done elsewhere on a custom basis. Closer control over production of cants now is possible with the recent erection of a small circular sawmill on the plant premises. All one inch stock accumulated from the sawing operation is used for crating stock for shipments from Crescent City.

Sales agent for Coastal Veneers is CPI Veneers, of Portland and Seattle.

1 General manager is Peter Koehler, here measuring a log. All stock is boiled. Four vats, background, are used. Two are oil heated, two are heated from the plant's boiler system. Usually, one species is loaded in all vats. All boiling is at 160 degrees; madrone for 36 hours and Douglas fir for 24 hours.

2 Two men work the deck around the vats. This portable planer is used to remove all bark from flitches and then an axe is used to chop out knots. Potential damage to slicer knives is reduced to a minimum.

3 The Capital slicer will take flitches up to 31"x36" and in lengths to 12'. Offbearers are stacking slices from each flitch. The slab left after final slice is used as a stacking board for the next series of slices.

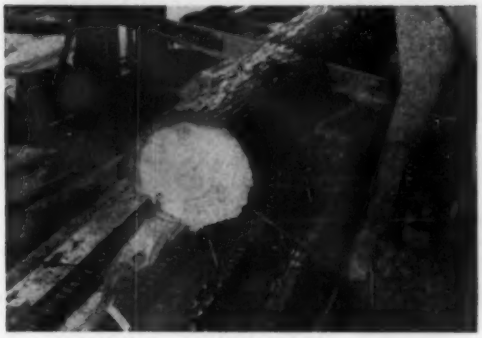
4 Workman is feeding the James Dryer Co. dryer. Dryer is an oil fired, direct heat unit. It has 22 fans and veneer is carried on chain link conveyor.

5 At outfeed, workman pulls, grades and stacks slices from each flitch. Madrone sliced 1/24" dries in 13 minutes; Douglas fir sliced 1/16" dries in seven minutes.

6 Superintendent Ray Stiles shows typical shipping package, veneer slices crated with one inch stock cut from refuse and strapped with Acme steel strapping. ■■

BETTER WAYS

to do the job

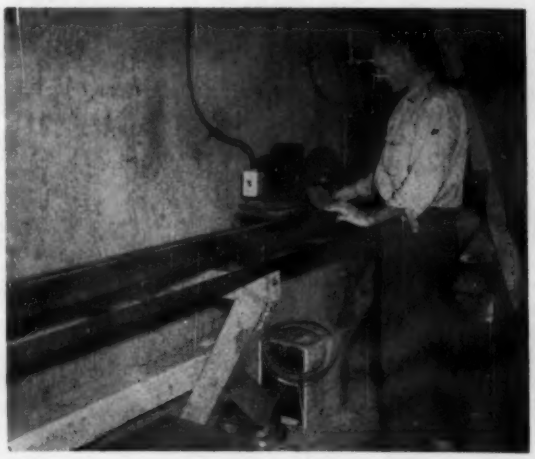


WATER IS WORKING for Western Veneer & Plywood Co. at Lebanon, Ore. and the International Paper at Vaughn, Ore. Above, left, water jets spray water on block ends at deck saws as guides for bucking at Vaughn plant. Jets can be set to mark 6, 7, 8, 9 and 10-foot blocks with valves controlled by deck sawyer. Above, 22 jets move blocks to log deck pond saw at Western Veneer, freeing one man for other duties and eliminating one shift on the pond saw. A 30-inch paddle wheel powered by ½-hp Reeves gearhead motor moves blocks from the pond saw. A Gardner-Denver water pump provides water to the system at the rate of 750 to 800 gpm. Spray heads are ¼-inch fire nozzles, 30 feet apart, angled down the lane.

PLYWOOD OILER at Lane Plywood, Inc., Eugene, Ore., allows two men to oil 3500 Plyform panels per shift. Oil is pumped into a 200-gallon half-cylinder reservoir, then to small reservoir on top of machine from where it overflows onto spreading rolls. This cup-like reservoir extends the width of the machine, overflows oil uniformly on the rolls. Eight-inch spreader rolls with 3-inch steel rolls pull panels through machine. Texaco paper machine oil is used.

SALVAGE SAW at Fortuna Plywood Co., Fortuna, Calif., utilizes shadow line. Stock is fed from 3/16-inch steel feed table. One feeder man and two offbearers are required. The saw works on graveyard shift, provides stock for three shifts.

ROLLER BAR GRINDER developed by Herb Bloom, master mechanic at Vancouver Plywood Co., Springfield, Ore., relieves lathe operator from any sanding or other work on bars. The grinder has rails of 1-inch keystock cold steel, a Delco 1-hp electric motor mounted on a carriage driving the wheel. Bloom taps his bars with a ¼-inch tap on 15-inch centers, coinciding with lubrication holes. Bars are bolted to the machine when grinding, are trued as required. Bars are checked with a micrometer after grinding to determine amount of shimming needed before reinstalling. Sections of steel strapping serve as shims. Morton 37C60-K5V wheels are used for copper and brack with 32A60-L5VBE for grinding steel. Roller bearings on centric pins are mounted under the grinder for final adjustment before grinding.



Simpson Research Laboratory Will be Showplace of Firm's Products

The new research laboratory of Simpson Timber Co. at Bellevue, Wash., will serve the firm's 21 production plants extending from Everett, Wash., to Eureka, Calif. The structure will cover about 20,000 square feet. Paul Hayden Kirk, Seattle architect who has achieved national prominence in creativity with wood will design the laboratory. It will feature Simpson wood in the form of stressed skin plywood panels, folded plates, box beams and selected plywoods. An initial staff of 40 persons is planned.

Empire Mills Plans Squamish, B. C., Plants

Empire Mills, Ltd., Vancouver, B. C., has announced plans for a $3,000,000 sawmill and plywood plant at Squamish, at the head of Howe Sound, following the company's successful application for a forest management license in that area.

B. J. Keeley, president, says construction will be under way during the coming summer and that a merger with Mount Baker Plywood, Ltd., will shortly be completed with a view to moving the existing plant, now producing veneer, to Squamish.

"Our primary concern was to get into plywood production at Squamish," said Mr. Keeley, "but the advantage of integration with lumber production appealed to us, and we hope that eventually Squamish will be the base of a widely diversified wood processing operation."

Mount Baker Plywood, Ltd., has been operating its green veneer plant on the Fraser River, opposite the city of New Westminster, for about five years.

Empire Sawmills has operated a small mill on the Fraser River, near Vancouver, for some 25 years, but its only activity at Squamish has been in connection with a logging operation, which will now be considerably expanded.

Mr. Keeley said the Squamish sawmill will produce about two million feet per month initially on a two-shift basis. The plywood plant will be about the same size as Western Plywood Co.'s at Quesnel.

The tree farm license was won by Empire Mills only after a long controversy which was ended when Judge C. W. Morrow, acting as commissioner for the provincial government, gave his approval. The license was originally given to Empire Mills in 1951, but it was appealed by MacMillan & Bloedel (now MacMillan, Bloedel & Powell River, Ltd.), Western Plywood Co., and several independent logging operators who claimed the 385,000 acres involved were more suitable for a single company license than for a working circle, as had been argued. Most of the timber in the area is Douglas fir.

•

U. S. Plywood Buys Panelbild Systems

A move into the field of prefabricated building components has been announced by Gene C. Brewer, president of United States Plywood Corp.

United States Plywood, Mr. Brewer announced, has acquired Panelbild Systems, Inc., of Seattle, Wash., a manufacturer of stressed-skin plywood components. He said plans already have been approved to expand Panelbild's Seattle facility, and studies are under way to determine possible location of additional units.

Peter Bilder, founder of Panelbild, will continue as operating head of Panelbild Systems, which becomes a subsidiary of United States Plywood.

Mr. Brewer said United States Plywood acquired Panelbild because "this is a whole new concept of building which has recently gained tremendous momentum. Naturally, we want to assure ourselves that our materials retain and expand their share of total sales as this important field develops.

"Acquisition of Panelbild will give us an entry into a field which we believe will open profitable new markets for United States Plywood. Since we know that long-distance transportation of large components is not economical, we visualize the establishment of additional units coordinated with our present network of 124 branch sales warehouses."

G-P Sees April Start At New Plywood Plant

In April, Georgia-Pacific Corp. expects to be producing plywood at a new plant in Springfield, Ore. The new plant will produce about 10 million square feet a month, will be integrated with the existing plant that produces 11.5 million square feet a month.

The new plant will also incorporate a stud mill for converting cores and to handle some small logs.

The new plants will be housed by an L-shaped structure 320x560 feet and 92x260 feet. The two presses to be installed will be for 4x8 and 5x10 panels with the 4x8 unit designed for conversion to 5x12 panels. The existing Springfield plant can produce panels 5x12 feet.

•

$750,000 Modernization Program Scheduled

Major project in the extensive plan at Timber Products Co., Medford, Ore., is new steam generating facilities for both the lumber and plywood divisions. This phase will cost $500,000.

Also planned are a new 24-opening hot press, a semi-automatic panel patching and handling system and automatic continuous moisture recorders for the veneer dryers.

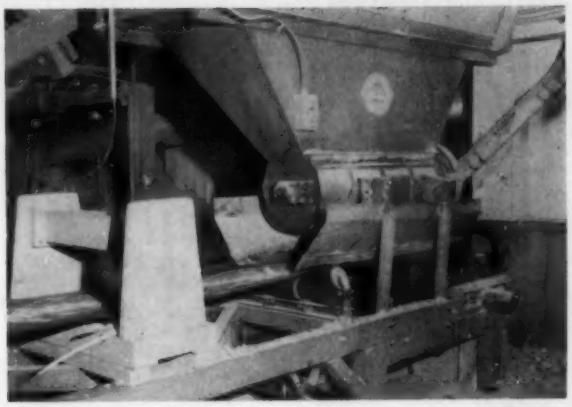
The firm is starting a research program seeking new uses of mill residues and improved manufacturing techniques.

•

• Bislig Bay Lumber Co., Manila, Philippines, has completed installation of a $1 million veneer plant as part of an expansion program to increase and diversify its production, Col. Andres Soriano, chairman of the board, reports. U. S. Plywood Corp. will use most of the plant's output.

Metal Detector Protects Equipment by spotting tramp metal in chip material before it enters machines.

A quick jab of a wrist watch into the sensitive area within the metal detector demonstrates how the chip belt is immediately stopped at Pacific Veneer division, Canadian Forest Products, Ltd. hardboard plant in New Westminster, B. C.



When metal is detected, the feeder automatically stops and the rubber belt reverses. Chips containing tramp metal are dumped off the end of the belt (see arrow) and into trash pile. The metal detector is so sensitive it can stop the belt when a gum wrapper passes through it. ■■

U. S. Plywood to Handle Guatemala Plywood Panels

The entire exportable surplus of Industria De Madera "Las Quebradas," the only plywood manufacturer in Guatemala, will be marketed by U. S. Plywood Corp.

The firm operates a plywood mill about 17 miles from Porto Barrios and a veneer mill in Porto Barrios. The veneer plant will be converted to plywood with U. S. Plywood assistance.

Principal species manufactured by the Guatemala plant is Banak, a dark red hardwood with highly figured grain which is expected to make a very decorative prefinished wall panel.

•

DFPA Elected Officers Take Active Roles

Douglas Fir Plywood Association has announced an administrative reorganization under which officers who were formerly honorary are now active in the management of DFPA promotion policy.

Previously, the association was run by a separate management committee.

The new officers include: C. Henry Bacon, Jr., Simpson Timber Co., Seattle, Wash., president, and J. H. Martinson, Puget Sound Plywood, Inc., Tacoma, Wash., vice president.

Harrison Clark has been named DFPA secretary and H. A. Peterson, treasurer. Both are DFPA employees and have been prominent in association administration for many years.

W. E. Difford, formerly the association's managing director, now carries the title of executive vice president.

The following men have been elected as voting members of the board of trustees: Mr. Martinson, George Raknes, Centralia Plywood, Inc.; George Weyerhaeuser, Weyerhaeuser Co.; F. L. Foval, International Paper Co.; J. L. Buckley, Georgia-Pacific Corp.; Howard Lemons, Edward Hines Lumber Co.; Kenneth Ford, Roseburg Lumber Co.; John Connors, Brookings Plywood Corp., and K. L. Morrow, United States Plywood Corp.

•

New PFS Member

Columbia Laminating Co., Portland, Ore., has affiliated with Plywood Fabricators Service and expects to be in production of plywood components early in 1960. Columbia Laminating manufactures solid core doors, plywood specialty items and special custom laminations.

Lake States Association Announced Merger

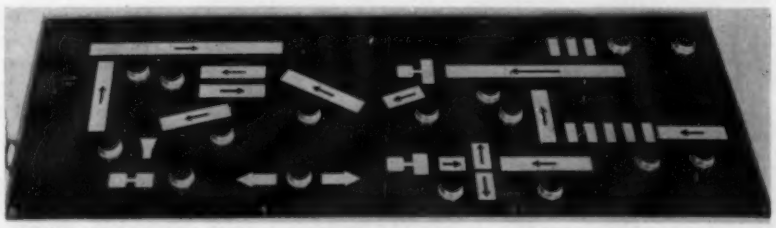
The Northern Pine Manufacturers Association and the Northern Hemlock Hardwood Manufacturers Association have merged. The resulting body is called the Northern Hemlock & Hardwood Manufacturers Association.

At its annual meeting late in February, the Northern Hemlock & Hardwood Manufacturers Association celebrated its 50th anniversary.

The Northern Pine Manufacturers Association was established in 1906 with the amalgamation of the Wisconsin Valley Lumberman's Association and the Mississippi Valley Lumbermans Association.

•

• J. Leo Hoak has retired as president of Wheeler Lumber Bridge & Supply Co., Des Moines, Iowa, and is succeeded by James McClain Hoak. Carl T. Jensen is executive vice-president and H. I. Schell is vice-president.



ACTUAL MATERIAL FLOW through the plant is shown on this illuminated Redco control panel for the chip and hog fuel system at the U. S. Plywood Corp. sawmill at Roseburg, Ore.

Lighting and Planing

feature Northwest Timber Co.'s new planing mill at Coeur d'Alena, Ida.

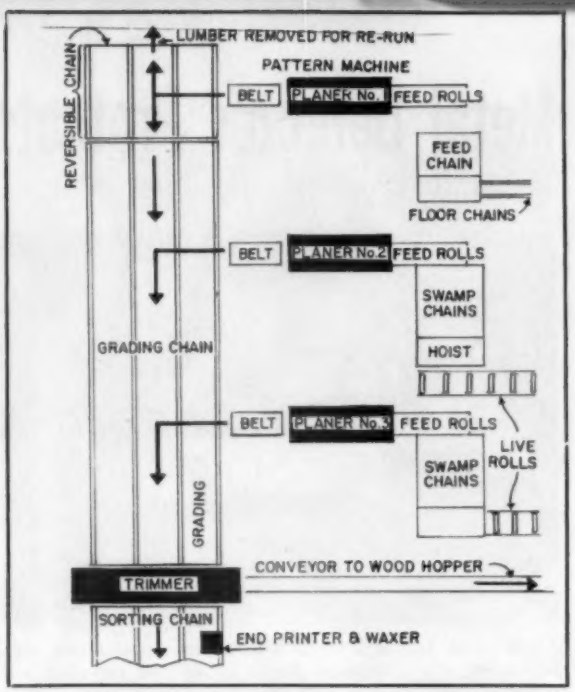
Objective of the mill layout shown at right was to set up the machines for simplicity and compactness without giving up any efficiency in material flow, M. J. Heutter, general manager, says.

All equipment is new. Three Yates-American planers are the key machines. The No. 1 planer is a pattern machine; the two conventional planers are operated at 237.5 fpm.

All lumber produced is kiln dried stock, largely Engelmann spruce, ponderosa and white pine and the other associated species of the Western Pine region. Through careful planning, it has been possible to provide three separate rail siding inside the plant.

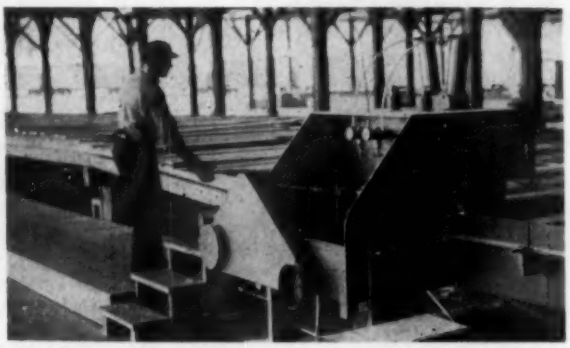
Equipment

Three Yates-American planers, Irvington end-surfacer, Dodge power transmission equipment, Moline chain, Irvington end-conditioner and printer, U. S. S. Columbia-Geneva steel plower pipes, Holophane Co. lighting, two Bitco breakdown hoists, one Star Machinery Co. rip saw and electric motors from Fairbanks-Morse, U. S., General Electric.

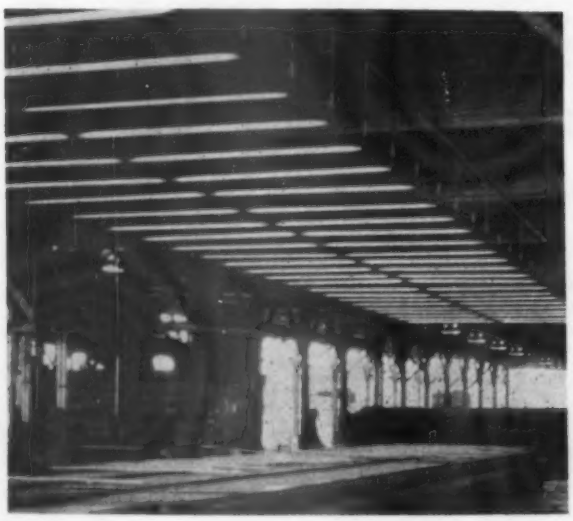


Grinding room equipment includes Armstrong circular saw grinder, Jones & Orth set-up machine, Yates-American knife grinder and sidehead grinder.

One of three planers in plant. All are belt-driven off electric motors through rubber V-belts.



Finishing work on lumber . . . end surfacing and printing and waxing is done on 11-saw Irvington unit.



Excellent lighting is achieved by 27 double fluorescent lights over grading table. They produce 120 candlepower of light at the grading chain, with no glare. These lights hang on pipe connected to 2x2-inch channel iron. Channels carry all the lighting wires. Beyond trimmer (background) on the sorting chain and over the planers, 60 candlepower light is furnished by a series of twin fixtures, each consisting of a 500-watt incandescent light and a 400-watt color-corrected mercury vapor lamp. With high output ballast, each twin unit is rated at 980 watts. The 500-watt incandescents are spaced throughout the storage shed to give from 10 to 30 candlepower.

The fluorescents, made by Holophane, are covered on the floor side by heavy glass and aluminum. Each fixture is constructed to permit the escape of heated air out through the top, thus preventing build up of high temperatures that might damage the lights. Severe cold weather effect on the fluorescents is minimized with the 1500 milliampere high output ballast. Without this extra output, fluorescents take a longer time to come up to full brilliance when started during the cold periods. ■■

1960 PRESIDENT of the Western Wood Preservers Institute is Don B. Bowman, right, Cascade Piling Co., Tacoma, Wash. At left is new vice president Richard N. Stanley, Koppers Co., Seattle. With the new officers is C. F. Craig, J. H. Baxter & Co., Portland, whom Bowman succeeds as president.

PREMATURE PILING FAILURE was discussed. Most instances can be traced directly to insufficient preservative, not failure of the preservative to do the job. Members were urged to secure disks of such pilings—whenever practicable—and send them to the U. S. Forest Products Laboratory at Madison for evaluation.

Western Wood Preserving Operators Assn. Expands Funds for Promotion, Research

At its 1960 annual meeting at San Francisco in mid-January, WWPOA voted to increase its assessments on member companies by approximately four times and announced plans for more promotion, more research projects, brand marking by all members and stepped-up quality control procedures.

Some 35 representatives from western companies were at the meeting and, for the first time since WWPOA was organized—in 1952—a company from the Islands attended the meeting. Honolulu Wood Treating Co., Ltd., was represented by its president and general manager, Clinton Hallsted. From the opposite direction, Chicago, came Miles Burpee, of the American Wood Preservers Institute.

Before the end of 1960, all member companies in WWPOA will be branding their products with coded brands identifying treating company, location, kind of treatment and retention. "This is going to be done because it is good market practice and good public relations," said outgoing president C. F. Craig, Portland, "and it will be helpful to inspectors."

Along with this program there have been basic requirements laid down for a stepped-up quality control program. By the end of the year, most of the program will have been outlined.

In the expanded promotion effort one of the things to be dwelt on is the association's speaker and college information program. Functioning so far on a somewhat limited scale, the program has shown itself to be an effective one and will receive increased attention. Contacts are both with forestry schools and engineering schools, and the program includes placement of technical information on the shelves of these schools.

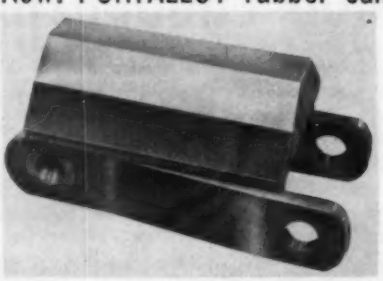
A summary of building code-change efforts was given the group and it was pointed out that there must be constant vigilance on this subject, for supporters and manufacturers of competitive materials are always on the job trying to arrange for replacement of wood or wood products.

Expansion of rigid pillar construction from farm-type buildings only to business and commercial buildings, show rooms, retail stores and manufacturing facilities was described. The committee reporting on this subject pointed out that increased sales in this field in 1959 stemmed not only from construction by individual users, but also from building contractors who used design information and technical data furnished by WWPOA. It is expected that 1960 will show further increases in this type construction.

In California, use of pressure creosoted wood posts is becoming standard for freeway fencing. The state is also using special pressure treated wood posts and blocks for many miles of medium strip on its freeways.

The group was told that the seats in the San Francisco Giant's baseball stadium, elm, were pressure treated with pentachlorophenol. ■■

Now! PORTALLOY rubber camel back chain for use in selective transfer handling



Ask for details about this chain and all PORTALLOY standard chains, also rubber covered rolltop

Special Non-Marking White Rubber Is Used To Eliminate Bruising

The Rubber Is An Integral Part of Chain
NOT AN ATTACHMENT

- WILL STAND TOUGH WEAR
- ELIMINATES DOWN GRADING
- COMES IN STANDARD H-78 AND H-138 CHAIN ON THE FAMOUS PORTALLOY STEEL QUALITY CHAIN

PORTLAND CHAIN MANUFACTURING CO.

4000 N.W. Yeon ● Portland, Oregon ● CApitol 8-9219

KLAMATH MACHINE
& LOCOMOTIVE WORKS INC.
P. O. BOX 200 • KLAMATH FALLS, OREGON, U. S. A.
Look for the Indian Head on all KLAMATH MACHINE products
Export Division: FRAZAR & HANSEN, Ltd.
301 Clay Street, San Francisco 11, California, U. S. A.

ENGINEERS • FOUNDERS • MACHINISTS
DESIGNERS and BUILDERS
HIGH GRADE SAWMILL MACHINERY

FOREST PRODUCTS STOCKS

NOMINAL QUOTATIONS

La Salle Securities Co., Investment Securities,
208 La Salle Street, Chicago, Ill.

February 5, 1960

STOCKS	Paid 1959	This Month Bid	This Month Ask	Last Month Bid	Last Month Ask
Ambassador Oil, Com.	$ —	3	3⅜	3⅛	3½
American Forest Products, Com.	1.00 &S	33	35	32½	34½
Anderson Tully Co., Capt. Stk.	20.00	310	OW	310	OW
Atlas Plywood, Com.		13	C	14⅛	C
Atlas Plywood, $1.25 Pfd.		23½	25	24	26
Biles-Coleman Lbr. Co., Com.	*	19¼	OW	18	OW
Boise Cascade Corp. Com.	.60	53	55	48½	51
George E. Breece Lbr. Units	.05	2½	OW	2½	OW
British Columbia Forest Prod., Com.		12⅞	C	13⅞	C
Brooks-Scanlon, Inc. "A"	.80	19½	OW	19	OW
Brooks-Scanlon, Inc. "B"	.80	19½	OW	19	OW
Calaveras Land & Timber Co., Com.	2.00	27½	OW	27	29
Calcasieu Paper Co., Com.	1.50	30	OW	25	OW
Cascades Plywood Corp., Com.	1.75	33	34½	36	37½
Central Coal & Coke Co., Com.	1.00	32	34	32½	34½
Cherry River Boom & Lbr., Com.		45	OW	45	OW
Chicago Mill & Lbr. Co., Com.	1.25	22½	24½	23½	25
Cloquet Lumber Co., Com.	*	1	OW	1	OW
Consolidated Naval Stores, Capt. Stk.	30.00	950	OW	925	OW
Container Corp, Com.	1.00	25⅞	C	28⅞	C
Container Corp. 4% Pfd.	4.00	84	C	82	C
Crossett Company, Class "A"	.65	53	56	55	59
Crossett Company, Class "B"	.65	53	56	55	59
Crown Zellerbach, Com.	1.80	48	C	53⅛	C
Crown Zellerbach, $4.20 Pfd.	4.20	87¼	C	87	C
Curtis Companies, Com.		8¾	9¾	9	10
Dierks Forests, Inc., Com.	5.00 &S	150	OW	150	OW
Evans Products, Com.	.50	18¼	C	20⅛	C
First Lumber Corp., Com.	50% S	13	14	14½	15½
Fordyce Lumber Co., Capt. Stk.	1.50	42	OW	42	OW
General Plywood, Com.		13½	C	14⅞	C
Georgia-Pacific Co., Com.	.50 &S	46	C	50⅛	C
Harbor Plywood, Com.	.40	20⅞	C	22	C
Edward Hines Lumber Co., Com.	2.50	36½	38½	39	42
Insular Lumber Co., Com.	1.25	12	15	12	OW
International Paper, Com.	3.00 &S	117¼	C	134⅞	C
International Paper, $4 Pfd.	4.00	86½	C	86½	C
Keyes Fibre Co., Com.	1.20 &S	14½	15½	15	16½
Kirby Lumber Corp., Com.	2.00	47	49	47	48½
Longview Fibre Co., Com.	3.50	95	98	93	96
Louisiana Central Oil & Gas, Com.	10.00	50	OW	50	OW
Louisiana Long Leaf Lumber Co.	*	150	OW	152	OW
Louisiana Sawmill Co. Com.		¾	OW	½	OW
MacMillan & Bloedel, "B" Com.	1.40	37¾	C	42½	C
McCloud River Lumber Co., Com.	4.00	108	115	113	120
McCloud River Railroad, Com.	3.00	43	OW	43	OW
Meadow River Lumber Co., Com.	*	225	OW	225	OW
Medford Corp., Com.	11.00	240	265	270	280
Mississippi Land Co., Capt. Stk.	1.60	15	OW	16	OW
Northwest Paper Co., Com.	.15 &S	34	37	36	39
O. & N. Lumber Co., Capt. Stk.	2.00	42	OW	42	OW
Olin Oil & Gas, Com.	2½% S	17	18	20	22
Ozan Lumber Co., Com.	4.00	92½	OW	92½	OW
Pacific Lumber Co., Capt. Stk.	12.00	330	OW	330	OW
Pickering Lumber Co., Com.	.40	10¼	11¼	11½	12½
Pine Tree Manufacturing Co.		50	OW	50	OW
Pope & Talbot, Inc., Com.	1.25	35½	37	34½	36
Pope & Talbot, Inc., Pfd.	.30	4¾	5⅛	4¾	5¼
Potlatch Forests, Com.	1.00	54	56½	56	59
Puget Sound Pulp & Tbr. Co., Com.	.80	27¼	C	29	C
Richmond Cedar Works Mfg., Com.		½	1	1½	1
Richmond Cedar Works, Com.		1	2	1	1½
Ritter, W. M., Lumber Co., Com.	2.50	40½	OW	40½	OW
Roddis Plywood, Com.	.40 &S	15½	16½	15½	16½
St. Regis Paper, Com.	1.40 &S	47	C	54¼	C
Southern Minerals Corp., Com.		3½	4½	3¼	4¼
Southwest Forest Indust. Com.		17¾	19	17½	18½
Tremont Lumber, Com.	2.00	OW		70	OW
U. S. Plywood, Com.	2.25	46¾	C	48½	C
Union Lumber Co., Com.	1.40	57	61	61	OW
United States Lumber, Com.	.35	4⅛	5⅛	4¼	5¼
Upson Company, Com.	.40	13	14	12	13
Weyerhaeuser Timber, Com.	1.10	38¾	41	40	42
Winton Lumber Co., Com.	1.00	16	OW	16	OW
Wood Conversion Co., Com.	.45	14	15	14½	16½
Wooduse, Inc., Com. (Now Fersolin Corp. Com.)		1	2	¾	1¼
BONDS					
Georgia-Pacific Corp. Subordinated Deb., 5s due 1976		83	86	81	85

*—Information not available BW—Bids Wanted S—Stock
OW—Offerings Wanted C—Last Sale on Exchange where listed or bid

THE ABOVE INFORMATION, WHILE NOT GUARANTEED, IS OBTAINED FROM SOURCES WE BELIEVE TO BE RELIABLE

CLAYTON "STEAM ON DEMAND"
SPEEDS PLYWOOD PRODUCTION

The Clayton steam generator maintains constant uniform press temperature throughout curing cycle. Gives instant response to load demand — with no platen temperature fluctuations, no time loss for temperature recovery. "Steam on demand" means faster production, fewer rejects. For details, write to:

Clayton MANUFACTURING COMPANY
415 461 N. Temple City Boulevard, El Monte, California

Supplied, Engineered, Installed and Serviced in the Pacific Northwest by A. W. Mortenson Company • Portland: 1117 S. E. Morrison, BE 5-3165 • Seattle Office: 1016 First Ave. S., MAin 3-5006.

Dries wood fiber to 5% in 12 seconds!

At Cascades Plywood Corporation of Lebanon, Ore., a Heil Dryer (left) receives wood fiber produced from green veneer chips in an attrition mill and in approximately 12 seconds, reduces moisture content to about 5 percent from 50 percent (dry wt. basis).

The end product is Lebanite hardboard, in thicknesses of 1/10, 1/8, 3/16, 1/4, 5/16 and 3/8 inches.

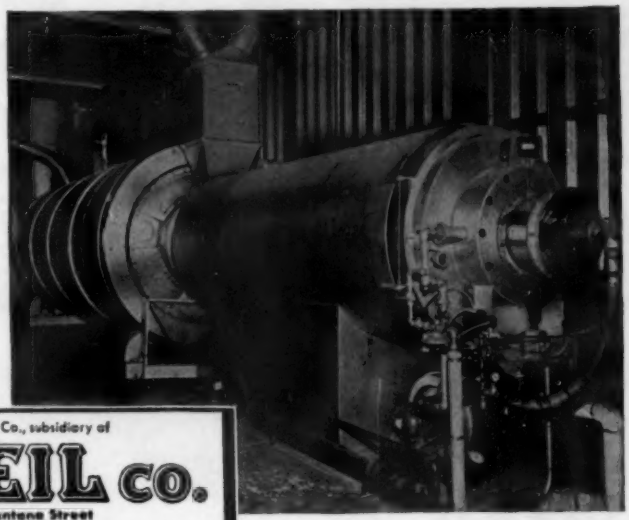
Present daily output is 150,000 sq ft of 1/8-inch Lebanite panels (Hi-Density Dry-Process S-2-S board). Two types of Lebanite are produced: one for conventional hardboard and one for high-pressure plastic laminates.

HEIL dries wood products quickly, uniformly

Your wood chips, shavings or sawdust can be dried *uniformly* in a matter of seconds by the Heil Dryer, then pressed into high-quality board . . . or other products.

A flow of hot air carries wood chips through the 3-pass drum in a Heil Dryer. Small, light particles dry quickly and are whisked away. Wetter, heavier particles move more slowly for longer exposure to drying medium . . . greater drying. This assures a uniform product with minimum variation in dryness between large and small particles.

Compound showering flights on drying drums eliminate surging . . . keep particles flowing in the hot air stream . . . provide maximum utilization of drying medium in shortest exposure time. Write, wire or call for further information.



The Arnold Dryer Co., subsidiary of

THE HEIL CO.

3000 W. Montana Street
Milwaukee 1, Wisconsin

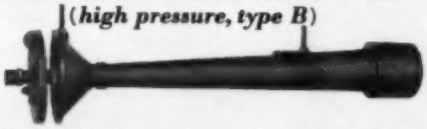
DFC BURNERS

Simple, Rugged, Low Cost

37 DFC Burners engineered for easy, low cost, maintenance-free operation, through long years of hard use. Atmospheric, high and low pressure inspirator, portable, tunnel, gas burners, gas-air mixers, oil burners and blowers. 80 years of burner experience...if you've got a burner problem, let us help you solve it.

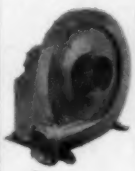
INSPIRATOR GAS BURNERS

(high pressure, type B)



Applications: Designed for use with natural or manufactured gas under **2 to 25 PSI.** Gives operational economy at low initial investment for boilers, dryers, heaters, incinerators, industrial furnaces, kilns, petroleum processing equipment and roasters. Nine sizes, from 80 to 24,000 cubic feet of 1,000 BTU gas per hour under pressures of 2 to 25 PSI.

Auto-Ratio Proportioning Oil Burner: Automatically maintains accurate air-oil ratio over entire range. Remarkable turn down ratio—up to 20 to 1. For dryers, heaters, industrial furnaces, kilns and roasters.



Centrifugal Motor Blowers: Low pressure blowers with double inlet and 16-oz. positive pressure series with single inlet, used as source of combustion air for industrial burner systems on boilers, dryers, kilns, industrial furnaces, petroleum processing equipment and roasters.

There's a DFC Burner to meet your requirements

DFO-2A

CALL OR WRITE FOR FULL INFORMATION

Denver Fire Clay Company

3033 Blake Street, Denver 17, Colorado

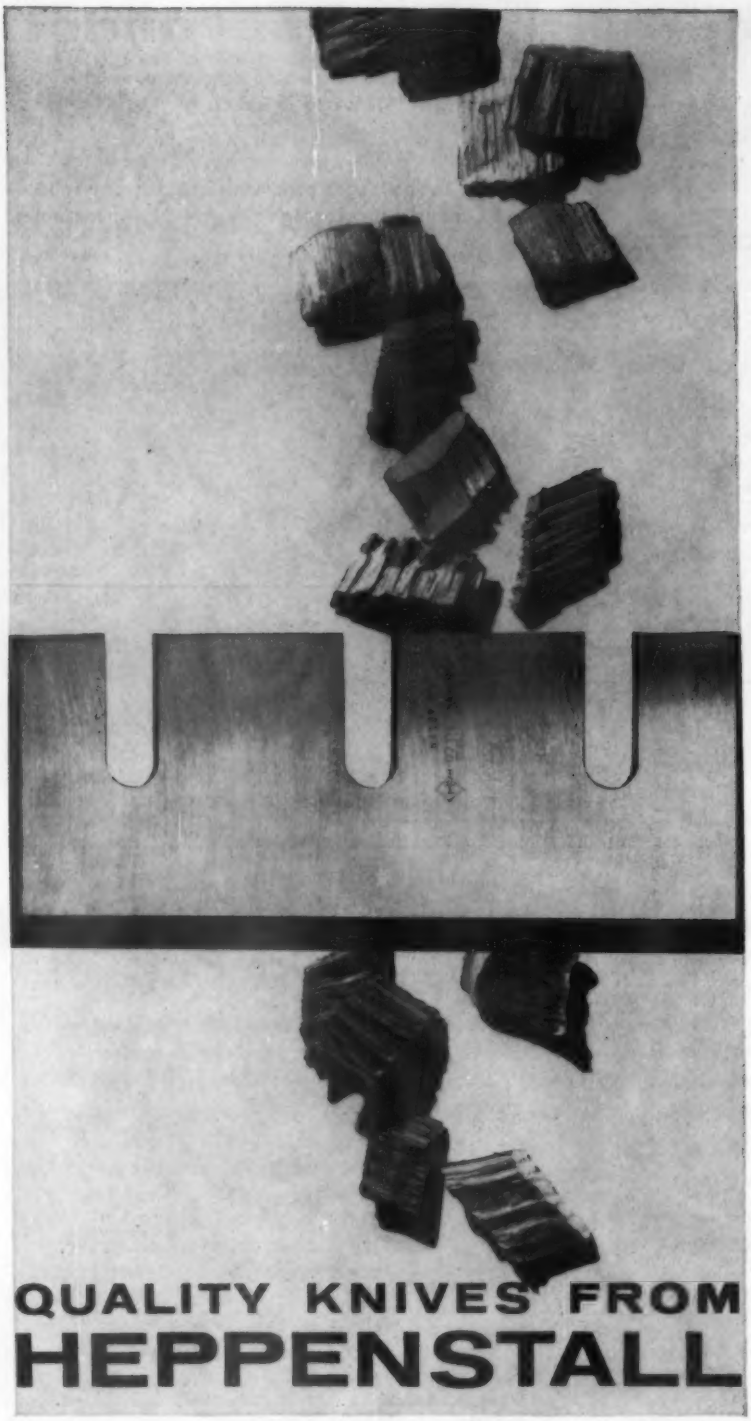
Please send me further information on your full line of Industrial Burners.

NAME.....

COMPANY.....

ADDRESS.....

CITY AND STATE.....



HEPPENSTALL COMPANY
Pittsburgh 1, Pennsylvania
PLANTS: Pittsburgh, Pa. • Bridgeport, Conn.
New Brighton, Pa.
MIDVALE-HEPPENSTALL COMPANY
Nicetown, Philadelphia 40, Pa.

DIE BLOCKS • FORGINGS • BACK-UP ROLL SLEEVES • RINGS
INDUSTRIAL KNIVES • MATERIALS HANDLING EQUIPMENT

Concrete Slab Floor Market Eyed by Lumbermen

Timber Engineering Co. has awarded a $20,000 research contract to Washington State University, Pullman, Wash., for research to develop all-wood flooring systems to capture the market now held by concrete slab. The university is contributing an additional $10,000 to the fund since the project will parallel and partially overlap an existing research program on wood panel construction.

The potential is a market that could consume up to one billion board feet of lumber annually.

William Scheick, vice-president of research of TECO, says the project may point the way to development of several new products by lumber and wood flooring manufacturers or lead to new methods of floor framing that incorporate plumbing, heating and insulation.

Sponsors of the program are Fairhurst Lumber Co., San Rafael, Calif.; Edward Hines Lumber Co., Chicago; Koppers Co., Pittsburgh, Pa.; McCloud River Lumber Co., McCloud, Calif.; Patlatch Forests, Inc., Lewiston, Ida.; Willamette Valley Lumber Co., Portland, Ore.; Weyerhaeuser Co., Tacoma, Wash.; Southern Pine Association, New Orleans, La.; National Oak Flooring Manufacturers Association and Southern Hardwood Producers, Inc., both Memphis, Tenn.

•

Engineered Wood In Use Features Mill Building

Crossett Lumber Co. is building one of the largest all-wood buildings as part of its $1 million plant modernization and expansion program. New techniques and new products will be used in the Crossett, Ark., building.

The big building will be the rough lumber storage area. The structure will be 103 feet wide, 468 feet long, 70 feet at roof apex and 55 feet high at side walls. All lumber used will be Southern pine.

The laminated wood members used will be manufactured by Unit Structures, Inc., at its Magnolia, Ark., plant. The 56-foot long tapered columns will be larger at the top than at the bottom. Base measurements will be nine inches thick and 30 inches wide. Top thickness will be the same but the width increases to 48 inches.

The curved top chord box-string trusses will also be glued laminated lumber. The trusses will clear span the 103-foot width of the structure.

The building will include a bridge overhead crane designed to lift eight tons of lumber and to travel at a rate of 650 feet per minute. Maximum capacity will be four million feet.

Western Box Production Up in 1959; Manufacturers Optimistic for 1960

Western Wooden Box Association member mills accounted for shipment of approximately 349 million feet of shook in 1959, about 36 million above the 1958 tally. Outlook for 1960, based on forecasts of good crops and harvests in the West, is for the best year since 1956.

Reports by outgoing president Bruce Walton and by secretary-manager C. O. Thompson at a San Francisco meeting both reflected the optimistic outlook for the coming year and the happy report on 1959 performance.

Mr. Walton commented especially on the quality of shook which the members shipped, saying that the overall quality was good throughout the year and that there were only a few rough spots in quality control.

Competition continues keen between nailed wood boxes and competitive containers—wirebound and corrugated. However, receiver acceptance of nailed wooden boxes continues high. There were no really new competitive containers introduced in 1959, Mr. Walton reported.

The association voted to continue the research project (a cantaloupe packing machine) for which it levied a special assessment last year. A prototype of this semi-automatic packing machine will probably be ready for a trial run in April or May.

Membership in WWBA now is at the highest percentage of producing mills in the region than at any other time since immediately after World War II, Mr. Thompson reported. One new member was added in 1959, Glanville Bros. Box Co., Roseburg, Ore. There now are 47 active members, seven associate and six honorary.

The WWBA field representative from Washington state was transferred during the year to California and henceforth will work from there.

New president of the Association is A. E. Macartney, Jr., Diamond-National Corp., Red Bluff, Calif. S. J. Starkey, Stockton Box Co., Stockton, is vice president and J. W. Barkeman, California Pine Box Co., San Francisco, is treasurer. C. O. Thompson was re-elected secretary-manager. He also is president of the Wooden Box Institute.

Advertising in 1960 will be restored to the level voted in 1958. The 1959 schedule was approximately halved when the association voted to begin the research project.

LAMB — Experienced in

PRESS PLATE REPAIR

LAMB-GRAYS HARBOR CO., INC., HOQUIAM, WASHINGTON

Veneer or Hardboard Hot Press Plates worn or damaged? Surface grinding, polishing, or flat tool finishing. AROUND-THE-CLOCK SERVICE when needed.

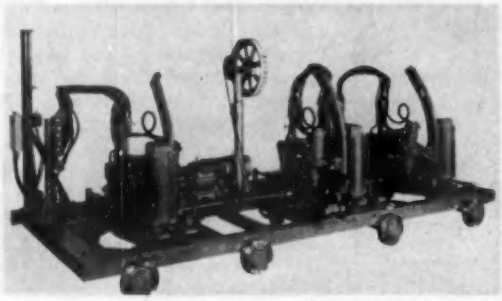
KMCo — SIMPLEX

Air-Operated Tong Dog Carriage Now Available With

SEL-SET SELECT-O-MATIC

Predetermining Remote Control

ELECTRONIC SETWORKS



Klamath Machinery Company SIMPLEX, 3-block, right hand, Tong Dog Carriage equipped with Sel-Set Select-O-Matic Electronic Setworks.

KLAMATH MACHINERY CO.

Box 781 Klamath Falls, Oregon Phone TUxedo 2-2588

Complete engineering services for sawmills, planing mills and lumber manufacturing plants

R. E. (Gene) Hooker H. J. Ellis

LAWSON'S

Creative Engineering

Saves You Time, Money and Labor

In Stacking, Unstacking and Lumber Handling

CALL, WIRE or WRITE for information, technical data, literature or the services of a trained engineer. There's no obligation, of course.

LAWSON STACKER CO., INC.

BOX 4813 • JA 7-3537 • MEMPHIS 7, TENN.

You don't pay the man who isn't there

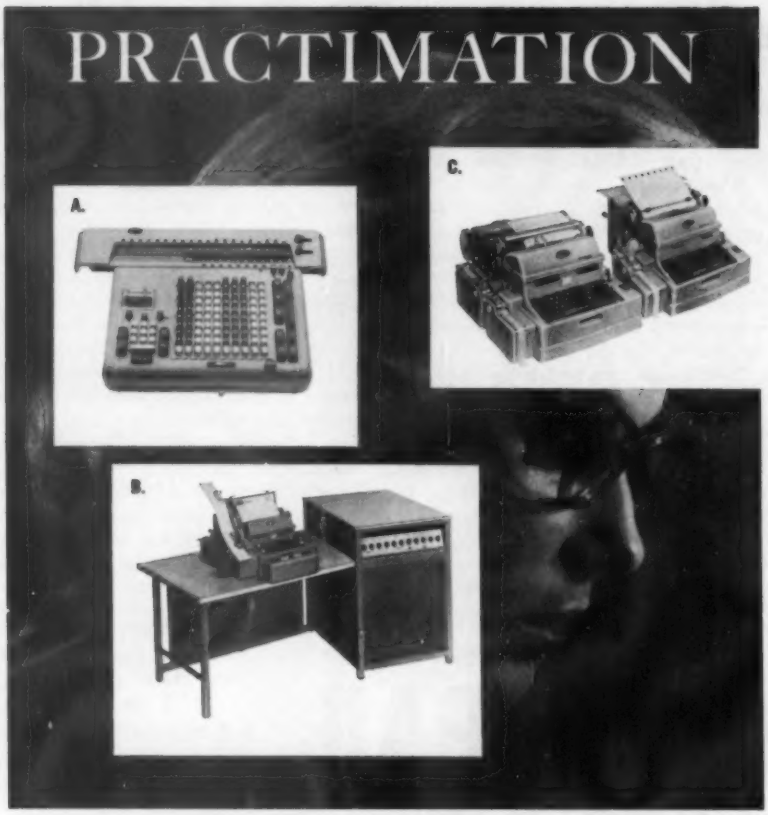
Engineered to Cut Costs

CORLEY

SAWMILL MACHINERY

CORLEY MANUFACTURING CO. CHATTANOOGA, TENN.

PRACTIMATION



A new word, which means more than automation, for it is the custom-fitted application of today's finest automation equipment to your particular needs...

This announcement is a culmination of Friden's years in integrated data processing. Friden's assumption of responsibility for the most important phase of automation—its practical application.

The first step to PractiMation is a critical analysis of your office. Second, an outline of objectives for increasing its efficiency (without personnel changes). Then, consult your Friden man. He is an expert, and has solved a good many problems like yours. His help can be invaluable.

Next, you need equipment that can be used by your present employees without special training; equipment which is sanely priced, easy to install. And, above all, equipment which is expandable with your business.

Here are some good examples:

A. Friden SBT Calculator—the famous "Thinking Machine of American Business." Touch-one-key simplicity. Performs more steps in figure-work without operator decisions than any other calculating machine ever developed.

B. Friden COMPUTYPER® (Model CTS)—writes and figures a complete invoice in one operation with virtually no operator intervention. Reads alphabetical or numerical data from punched tape, edge-punched cards or tabulating cards; data not pre-punched is entered through the typewriter keyboard. The Computyper CTS and any good typist make up an entire billing department.

C. Friden JUSTOWRITER®—makes any typist a skilled type compositor. Automatically provides professional-looking composition for offset reproduction.

These are just three. Friden's full line of adding machines, calculators, accounting machines, mail room equipment, and "Tape Talk" IDP equipment can fully automate your office. Call your Friden man today, or write directly to Friden, Inc.

© 1960 FRIDEN, INC.

Friden Creates A New World for Business ®

Friden *has the system*

FRIDEN, INC. SAN LEANDRO, CALIFORNIA • SALES, INSTRUCTION, SERVICE, THROUGHOUT THE FREE WORLD.

Hardwood Cell Collapse Study Results Favorable

The University of California's Forest Products Laboratory, working on the problem of collapse in hardwood cells, has made favorable progress by applying a process known as reconditioning. This is a recovery treatment which has been used successfully abroad on collapse-susceptible hardwoods.

The process consists of subjecting collapsed wood with a moisture content of about 15 per cent after drying to live saturated steam at 212 degrees Farenheit for several hours.

Dr. Eric Ellwood, chief of the Laboratory's Timber Physics and Mechanics division, heads the team working on this problem and reports successful application of recondition on California hardwoods.

Reconditioning almost completely removed or greatly reduced collapse and the recovery in dimension of the woods was permanent.

Of the California hardwoods, tanoak, black oak, madrone, chinkapin and some other species, best results were shown with madrone.

An indication of the potential value of the state's hardwoods is reflected in the figures published by the Laboratory stating that the volume includes 2,036,000,000 feet of tanoak, 1,946,000,000 of California black oak, 1,076,000,000 of Pacific madrone, 83,000,000 of Golden chinkapin, and 859,000,000 of other species.

California Division of Forestry is lending financial assistance in the project.

•

Weyerhaeuser Picks Hunt For Coos Bay, Ore., Post

A. O. Karlen, branch manager of Weyerhaeuser Co.'s Coos Bay, Ore., operation retires March 31 and will be succeeded by Howard E. Hunt, general superintendent of the Everett, Wash., lumber division.

Hunt will spend several months supervising construction of new plywood facilities at the company's Longview, Wash., operation before taking over the new management post. In the meantime, Jack W. Titcomb, administrative assistant at Coos Bay, will serve as branch manager.

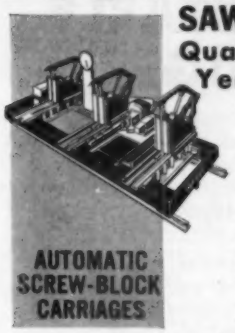
•

• Emanuel Fritz, professor emeritus, University of California, school of forestry, is serving in a consultant capacity for Jordan International Co., San Francisco, according to owner Harry Jordan. The company is an importer of many foreign timber species.

NORTHEAST

SAWMILL EQUIPMENT

Quality Constructed for Years of Rugged Use



Whether your requirements call for a single piece of equipment or a complete sawmill, our newly designed line of NORTHEAST sawmill machinery gives you a competitive advantage. Modern engineering features make faster, more accurate lumber production possible. You achieve maximum utilization of material and are assured greater profits. Look to NORTHEAST for the latest developments in sawmill equipment.

WRITE FOR CATALOG . . . COMPLETE INFORMATION

HEADSAWS • RESAWS CIRCULAR SAWMILLS

HYDRAULIC • CLUTCH AND ELECTRIC FEEDS

EDGERS • TRIMMERS OTHER EQUIPMENT

NORTHEAST OHIO MACHINE BUILDERS, INC.
P. O. BOX 367- D COLUMBIANA, OHIO

NOW AVAILABLE

1960 PLYWOOD DIRECTORY

Including

- **PLYWOOD DISTRIBUTORS** (of the United States)
- **PLYWOOD AND VENEER PRODUCERS** (of the United States and British Columbia)
- **HARDBOARD & PARTICLE BOARD PRODUCERS** (of the United States and Canada)

Order your copies now. Price $5 per copy.

THE LUMBERMAN

500 HOWARD STREET SAN FRANCISCO 5, CALIFORNIA

Kindly enclose remittance to avoid billing details

the accent's on

Resin—Fused Overlay
WELCHBOARD
Plywood Plus

WELCHBOARD makes sleek, sturdy panels. And Accent panels *make* the house. Actually, WELCHBOARD provides far more than good looks alone. It adds a real measure of dimensional stability and stubbornly resists all forms of weather and wear. That's because WELCHBOARD is plywood plus! It's exterior grade Douglas fir plywood—the only panel with a 1/16-inch thick overlaid face of phenolic resin and wood fibre. Result: A panel that is *always* smooth . . . perfect for paint, enamel or lacquer . . . easy to work . . . quick to erect. Accent panels of WELCHBOARD belong on your next house.

ANOTHER OUTSTANDING HOME OF WELCHBOARD.

Van Evera Bailey, A I A, created this home utilizing an exterior application of Welchboard board-and-batten—over three years ago. The exterior remains as smooth and free from checking as the day it was completed.

SEATTLE'S A I A HOME OF THE YEAR.

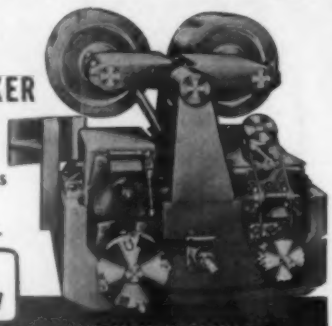
This beautiful award-winner, designed by architect Gene Zema, A I A, for his own residence, features striking accent panels of Welchboard in harmony with spacious window wall areas.

WEST COAST PLYWOOD COMPANY
Aberdeen, Washington

Manufacturers of famous "Tru-Bilt" Douglas Fir Plywood

Metal Detector *Save Machinery!*
Stop the Accident Before It Happens
Metal detector
SCR-625 Army mine detector
Recommended by U. S. Forestry Service and in numerous articles for finding concealed metal in logs and timber products. The Dautzler Lbr. Co., Perkinston, Miss., reports an estimated savings of $5,000 to $6,000 yearly. Write us for copy of free report of U. S. Forestry Service.
The SCR-625 is a portable instrument which may be used in the field to give an audible indication of buried metal in logs, underground, or in water. It may also be connected permanently with suitable automatic control devices for stopping machinery should imbedded metal in logs be encountered.
Detector is shipped in handy portable carrying case with instructions and ready to operate except for batteries. Ship. wt. 55 lbs. Our recent Government surplus purchase allows the present low price of $79.50 ea.
New set of batteries, per set—$6.27. Special price to quantity users or dealers upon request.
We maintain service and parts of the SCR-625. Parts price list on request.
Used Metal detectors $39.50
ESSE RADIO COMPANY
42 W. South Street Indianapolis 25, Indiana Phone: Melrose 4-8328

Dress Up Your Lumber
with this MODERN END PRINTER-WAXER
Here is a compact, easy-to-install machine that will build repeat sales for you. Get our new bulletin on the subject.



Leadership SINCE 1907
STETSON-ROSS MACHINE COMPANY INC
SEATTLE 4, WASHINGTON

Get the edge on your Cutting Profits . . .
with the
ALL-NEW
HEAPS PORTABLE 5"x36" EDGER

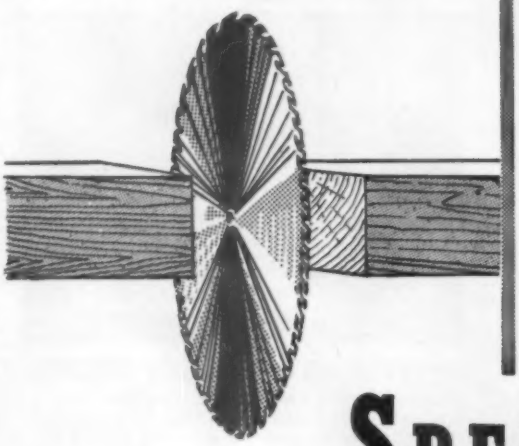
In addition to regular features including 6" press and feed rolls—outboard arbor bearing—driven in-feed press roll—dowelled arbor and feed works bearings—maximum depth of cut (5½" for 18" saw), this time-saving, money-saving HEAPS edger has numerous extra features.

- Feed works drive located entirely on drive side of edger, leaving other side free for easy removal of saws.
- Disc-type clutch to disengage feed works.
- Taper-lock hubs on all sprockets.
- Self-aligning, self-lubricating bearings throughout.
- Improved positive shifting device.

The HEAPS portable edger is also available either with or without in-feed and out-feed tables and in the larger 6"x42" size.

CAR-CAR **Canadian Car (PACIFIC) Limited**
Member of the A. V. Roe Canada Group
1660 Station Street, Vancouver 4, B. C. • Telephone MU 1-6181
"Western Canada's Great Name in Industrial Engineering"

Taking a bite out of your costs



THE SHARPER THE EDGE, THE KEENER YOUR PROFITS

From raw steel to final sharpening, we build in greater shock resistance and longer-lasting, sharper cutting edges . . . to give you more production at less cost.

Talk to us today about your requirements.

BAND SAWS CIRCULAR SAWS TEETH AND HOLDERS
CHIPPER KNIVES PLANER KNIVES HOG KNIVES
GRINDING WHEELS FILES

"The Saw Without a Flaw"

SPEAR & JACKSON
Eugene, Oregon

50-101A

Interior B. C. Sawmills Add Barkers, Chippers

Five sawmills in the British Columbia interior, affiliated with Kamloops Wood Conversion, Ltd., are installing Hansel barkers and chippers to enable them to produce pulp chips for Crown Zellerbach Canada and other coast pulp mills.

The companies involved are Kamloops Lumber Co. and Fadear Creek Lumber Co., both managed by Ken Long; B. C. Interior Sawmills, managed by C. J. Bessette; Nicola Valley Sawmills at Merritt, of which A. E. Nicholson is president, and Holding Lumber Co., of Squilax, headed by Arthur Holding.

All the barkers are 42 inches and the chippers are 54 inches, with the exception of a 60-inch unit going in at Holding Lumber Co. Hansel Engineering Co. is also providing the screens.

•

B. C. Mills Expand Modernize Operations

Several British Columbia sawmills are installing new equipment to increase production and speed of operation.

Columbia Cellulose Co., Prince Rupert, is spending $100,000 on rebuilding for an edger mill, the contract being awarded to Stolberg Mill Construction Co. A two-story mill will rip flitches and cants from spruce to be shipped to Vancouver for finishing. It's expected that production will average 100,000 feet a month.

S. M. Simpson, Ltd., Kelowna, has rebuilt the mill at Peachland destroyed by fire several months ago and has installed an Albany edger with drop roll case and Esterer gang saw.

Balco Forest Products has built, on the North Thompson River road, a mill regarded as one of the province's highest producers per dollar invested.

Holding Lumber Co. at Adams Lake, Bessette Timber Products at Kamloops and Eastern Pines Lumber Co. at Princeton have all installed skrag mills.

•

• Robert H. MacLea & Associates has been established in Baltimore, Md., to deal in timber products, domestic and foreign. Robert H. MacLea, former vice-president and treasurer of MacLea Lumber Co., Baltimore and president of Hanover Dry Kilns, Inc., Hanover, Pa., heads the firm. Primary products will be Appalachian and northern hardwoods, west coast products and Philippine mahogany.

NOXTANE Maintains Quality . . . Stops Sap Stain!

Noxtane kills fungi growth at the surface! Stops formation of blue-black stains that degrade lumber, eat up profits!

Easy to use! Just mix one 10-lb. bag with 100 gallons of water—can be used as a dip or spray. Dissolves quickly . . . penetrates fast . . . counteracts wood acids . . . resists leaching! Equally effective on pines *and* hardwoods.

Costs only a few cents per thousand feet—can save you thousands of dollars every year.

Get the complete story! Mail coupon for free folder on best way to stop degrading, protect profits!

WOOD TREATING CHEMICALS CO.
5137 SOUTHWEST AVE. • ST. LOUIS 10, MO.
WAREHOUSES: Atlanta • Charlotte • Oakland, Calif. • Portland, Ore. • St. Louis • Mobile Arcata, Calif. • Redding, Calif. • Jacksonville Macon • New Orleans • Shreveport • Meridian, Miss. Grants Pass, Ore. • Klamath Falls, Ore. • Salem, Ore. • Columbia, S. C. • El Paso.

WOOD TREATING CHEMICALS COMPANY
5137 SOUTHWEST AVE., SAINT LOUIS 10, MO.

Send me a copy of "Noxtane Stops Sap Stain" and name of nearest warehouse.

Company.....
Address.....
City.....Zone....State...
Signed.....

MANY MOTORS look practically alike on the outside, but it's what is inside that counts. There is no motor with better windings or more ample bearings—few motors compare favorably. Yet, the Brook Motor costs less, because of volume production, modern techniques, distribution in 76 countries and a realistic pricing policy. Brook Motors have established excellent performance records for over 56 years in every industry using a.c. motors. From 1 to 600 H.P. Send for literature.

SINCE 1904
BROOK ELECTRIC MOTORS

world's most respected motor

BROOK MOTOR CORPORATION
3302-04 W. Peterson Ave., Chicago 45, Illinois
Factory Representatives, Warehouses, Dealers in Principal Cities.
In Canada: Brook Electric Motors of Canada, Ltd.
230 University Ave., Toronto, Canada

can you operate YOUR pole plant
WITH ONLY FOUR MEN?

The answer is YES, if you use the NELSON SYSTEM of POLE PROCESSING

For a *free* analysis of how the Nelson System will fit your operation, just send a layout of your present plant.

If you would like a free copy of the brochure showing the Nelson System, please write the factory.

NELSON *Electric* MANUFACTURING CO.
TULSA, OKLAHOMA
P. O. BOX 5385 RIVERSIDE 2-5531

Data On Air Drying Of Incense Cedar

The second part of the study of the air drying of incense cedar in California has been completed by Harvey Smith of the Pacific Southwest Forest and Range Experiment Station, Berkeley, and Charles Berolzheimer, California Cedar Products Co., Stockton. This part of the study dealt with drying in winter. The initial study related to the dry summer conditions. The paper is available from the Station. Its conclusions are:

1. Three-inch-thick planks of incense cedar piled for air drying in Amador County, California, (3,000 feet) dried at various rates, depending on the type of wood. Sapwood and light heartwood dried to a uniform final moisture content of 15 per cent in 7½ months. Heavy heartwood dried to a final moisture content of 15 per cent in 11 months. However, this moisture content was not uniform throughout the cross-section of individual samples or between different samples. The final moisture content of heavy heartwood was greatly affected by its initial moisture content.

2. Width of material had no appreciable effect on drying rate or final moisture content.

3. Pile spacing and position in the pile had no appreciable effect on the drying rate or final moisture content. Wide planks checked twice as much as squares.

4. Flat-sawn material checked about twice as much as quarter-sawn.

5. Pile spacing had no significant effect on the incidence of checks in planks. A very narrow spacing, however, appeared to reduce checking of squares.

6. Under conditions of the experiment, incense cedar planks and squares, squares cannot be dried without a significant loss from checks. The greatest incidence of checks was on the tangential faces of the wider pieces, especially of heavy heartwood.

7. To develop a procedure for air drying three inch thick incense cedar lumber to a more uniform moisture content with fewer checks, some additional questions seem worth investigating?

   a. What is the comparative loss because of checks in the three types of wood, especially heavy heartwood?
   b. What is the green moisture content of incense cedar heartwood at different vertical positions in the tree?
   c. Which methods are effective to retard the drying of any categories likely to check?

LICK YOUR LABOR COSTS IN 1960
WITH Corinth's
CONTROLLED POWER

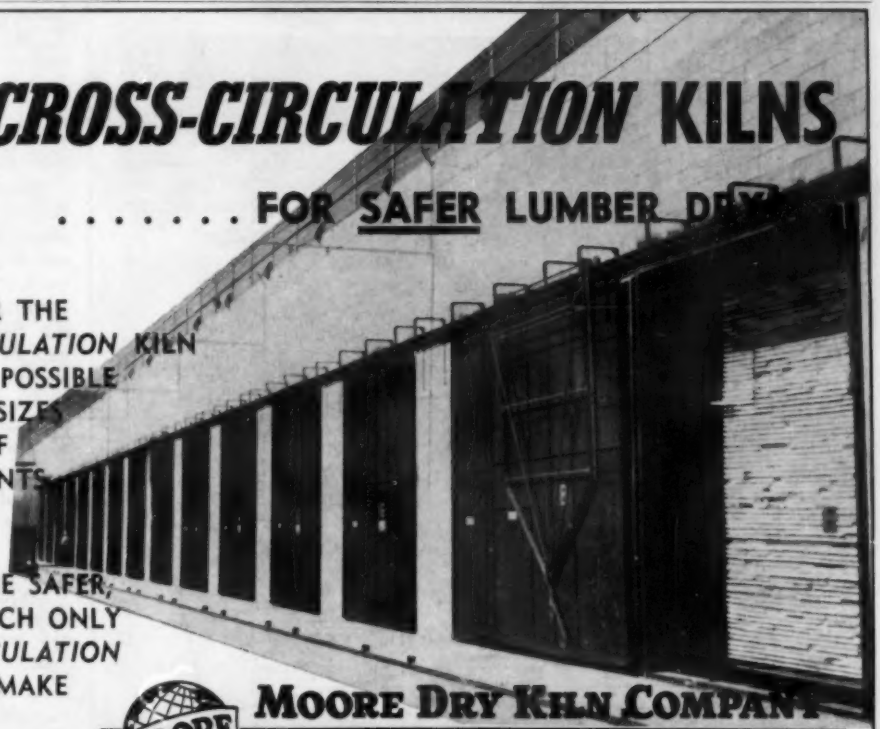
Here is the most economical and efficient means for **increasing production, reducing sawmilling costs,** and **maintaining the high quality** required in a competitive lumber market. For the finest in modern sawmill equipment, always look to CORINTH-AMERICAN . . . a leader in sawmill manufacturing since 1904.

Write or call us about your problem. Our engineering staff will help you solve it.

CORINTH AMERICAN MODERN SAWMILL MACHINERY

CORINTH MACHINERY COMPANY
AMERICAN SAWMILL MACHINERY CO.
Corinth, Mississippi
EXPORT SALES DIVISION: 30 CHURCH ST., NEW YORK 7, N.Y.

MOORE *CROSS-CIRCULATION* KILNS
. . . . . FOR SAFER LUMBER DRY



SEASONING LUMBER THE MOORE *CROSS-CIRCULATION* KILN WAY HAS MADE IT POSSIBLE FOR MILLS OF ALL SIZES WITH ALL KINDS OF DRYING REQUIREMENTS TO REAP PROFITS!

FIND OUT HOW THE SAFER, SURER DRYING WHICH ONLY MOORE *CROSS-CIRCULATION* KILNS OFFER CAN MAKE YOUR MILL A PROFITABLE ONE. WRITE TODAY FOR DETAILS.

MOORE DRY KILN COMPANY
JACKSONVILLE FLORIDA · BRAMPTON ONTARIO · VANCOUVER BRITISH COLUMBIA · NORTH PORTLAND OREGON
World's Largest Manufacturers of Drying and Handling Systems for Lumber and Veneer

Santobrite S

SANTOBRITE® S is a superior product for control of sap stain and mold. It is our pelletized grade of technical sodium pentachlorophenate. The pellets are non-dusting and easily dissolved. SANTOBRITE S is warehoused in all lumber centers. Vanderbilt technical representatives are always available to help with special problems.
Write for information today.

R. T. VANDERBILT COMPANY
SPECIALTIES DEPARTMENT
230 PARK AVENUE NEW YORK 17, N. Y.

Seaboard Lumber Sales 50 Years Old; Export Shipments Near 15 Billion Feet

The world's biggest lumber export organization, Seaboard Lumber Sales Co., of Vancouver, B. C., celebrates its 25th anniversary this year. So far, it has moved nearly 15 billion feet of lumber to offshore markets—shipments valued at close to $750,000,000.

Seaboard Lumber Sales Co. represents some 38 B. C. sawmills and plywood plants in marketing their export products.

Last year, Seaboard established no new records because, for one thing, the industry was virtually idle during the summer because of the strike, but it did ship more than 655,000,000 board feet, down 5% from the previous year's total. The company had more than 80 ships under deepsea charter, delivering shipments to the United Kingdom, the U. S. Atlantic seaboard, Australia, the West Indies and Africa. The actual chartering is done by an affiliated company, Seaboard Shipping.

At the annual meeting of Seaboard, L. L. G. Bentley, vice-president, Canadian Forest Products, was re-elected board chairman. First vice-chairman is T. Lloyd Roberts, of Rayonier Canada, Ltd. Other vice-presidents are Sam Heller, Pacific Pine Lumber Co.; W. S. Moore, Moore-Whittington Lumber Co.; R. S. McDonald, McDonald Cedar Products; D. R. Schmidt, general manager, Canadian Western Division, Crown Zellerbach Canada; Hector C. Stone, president, Hillcrest Lumber Co.; R. H. Ellisonn Canadian Collieries, and A. D. Anderson, Anderson Bros.

Vice-president and managing director is C. N. Effinger, who has been with the organization since its inception. Secretary is H. A. Berry.

Discussing 1959's activities, Mr. Bentley reported that prices have declined in recent months and are still not at pre-strike levels in the U. S. market; that production costs continue to climb, and that Russia and the Baltic countries are closing the gap with B. C. in productivity due to increasing mechanization, lower wages and lower freight costs. The premium on the Canadian dollar cost Seaboard about $2,000,000 last year.

But Seaboard has experienced a variety of conditions during its quarter century of operation and the organization is optimistic concerning 1960 prospects.

"While we didn't charter as many ships last year as usual," commented Mr. Effinger, "when we were using 100 or more cargo carriers most of them were Liberty ships with considerably less capacity than the ones we use nowadays. Last year, for instance, we had one ship of 14,300 tons and another of 13,400 tons. Such vessels carry about double the amount of lumber we were able to ship on the Liberty-type carriers. That indicates the trend in ship construction nowadays. We are able to ship more lumber today in fewer vessels."

Shipping rates declined last spring and summer, but increased in the fall due to the seasonal grain movement. In world shipping laid up dry cargo tonnage increased to 7,000,000 tons, but it now stands at about 5,000,000 tons. Some of this tonnage has been broken up, but most of the ships are still trading and should bring rates down again during the coming spring and summer, according to Seaboard officials, unless there are serious political disturbances.

View of Wheland Automatic Lumber Sorter at Tennessee Lbr. Co., Inc., Tampa, Florida

WHELAND AUTOMATIC LUMBER SORTERS

Cut Labor Costs • Boost Production • Increase Profit

Completely and accurately sort lumber for length, width, thickness and grade in one *profitable operation!* Volume production with a minimum crew . . . mill efficiency frequently doubles. Can be furnished to order for any installation and any number of separations. Why not investigate this easy way to step up your profits?

Detailed Bulletin on Request

THE WHELAND COMPANY

CHATTANOOGA, TENNESSEE—PHONE AMherst 5-3181

MANUFACTURERS OF COMPLETE SAWMILLS AND AUXILIARY MACHINERY

LUMBER PRICES

Douglas Fir

1x8	Utility S4S KD	$ 52- 57.00
2x4	Construction Dimension S4S KD	85- 87.00
1x4	C&Br VG Flooring KD	180-185.00
1x6	C&Br Drop Siding KD	155-160.00
1x6	C&Br S4S KD	170-175.00
1x8	C&Br S4S KD	170-175.00
1x10	C&Br S4S KD	175-180.00
1x12	C&Br S4S KD	215-229.00

Construction Timbers and Plank

3x12	6-20 feet	$ 95- 98.00
3x12	22-24 feet	100-103.00
3x12	26-32 feet	108-113.00
4x4	8-20 feet	96- 99.00
4x4	22-24 feet	101-104.00
4x4	26-32 feet	110-115.00
6x6	8-20 feet	95- 98.00
6x6	22-30 feet	102-105.00
6x6	32-40 feet	117-120.00
8x8	8-20 feet	94- 97.00
8x8	22-30 feet	99-102.00
8x8	32-40 feet	114-117.00
6x6, 8x10, 10x10, 12x12	8-20'	$92- 95.00
6x10, 8x10, 10x10, 12x12	22-30'	97-100.00
6x10, 8x10, 10x10, 12x12	32-40'	112-115.00

Construction Dimension (Green)

2x4	6-24 feet	$ 77- 79.00
2x6	6-24 feet	77- 79.00
2x8	6-24 feet	77- 79.00
2x12	6-20 feet	78- 80.00

Standard & Btr. Boards (Green)

1x4	6-20 feet	$ 59- 62.00
1x8	6-20 feet	70- 73.00
1x12	6-20 feet	68- 71.00

Douglas Fir Plywood

¼-inch AD SO1S ---------- $68

Southern Pine (KD Stock)

Vertical Grain Flooring

	BB	C	D
1x4	$215.00	$205.00	$152.00

Flat Grain Flooring

1x4	165.00	157.00	140.00
1x6	190.00	177.00	135.00

Drop Siding

1x6 No. 106	197.00	184.00	137.00
1x6 No. 116	197.00	177.00	137.00

Boards and Shiplap

	1x6	1x8	1x10	1x12
No. 1	$130.00	$130.00	$130.00	$175.00
No. 2	82.00	85.00	84.00	95.00
No. 3	69.00	76.00	71.00	71.00

No. 1 Dimension

	12	14	16	18	20
2x4	$105.00	105.00	105.00	119.00	119.00
2x6	101.00	101.00	101.00	116.00	116.00
2x8	100.00	100.00	100.00	115.00	115.00
2x10	112.00	110.00	109.00	125.00	125.00
2x12	115.00	112.00	112.00	125.00	130.00

No. 2 Dimension

	12	14	16	18	20
2x4	$100.00	100.00	100.00	115.00	115.00
2x6	89.00	89.00	88.00	111.00	111.00
2x8	88.00	88.00	88.00	105.00	105.00
2x10	93.00	94.00	94.00	103.00	108.00
2x12	95.00	94.00	94.00	115.00	120.00

Western Pine

Ponderosa Pine

Selects S2 or 4S	4/4 RW	5/4 RW	6/4 RW
C Select RL	$258.19	$263.33	$260.76
D Select RL	169.92	194.05	184.56

Shop S2S	No. 1	No. 2
5/4	$144.64	$112.94
6/4	145.02	113.29

Commons S2 or 4S	No. 2	No. 3
1x8" RL	$ 91.39	$ 72.48
1x12" RL	101.65	76.65

4/4 No. 4 Common S2 or 4S ---------- $ 58.48

Idaho White Pine

Selects S2 or 4S	4/4 RW	6/4 RW
Choice (C) RL	$267.44	$293.50
Quality (D) RL	173.03	257.50

Commons S2 or 4S	Col. (1)	Ster. (2)	Std. (3)
1x8" RL		$111.39	$ 81.07
1x12" RL		140.55	87.91

4/4 Utility (No. 4) S2 or 4S RW&L ---- $ 60.50

Sugar Pine

Selects S2 or 4S	4/4 RW	5/4 RW	6/4 RW
No. 1 & 2 Clear RL	$280.96	$284.08	$276.95
C Select RL	270.66	272.21	268.31
D Select RL	190.95	202.67	205.85

Shop S2S	No. 1	No. 2	No. 3
5/4	$150.90	$114.73	$ 84.14
6/4	148.84	113.34	83.46
8/4	165.91	129.13	86.03

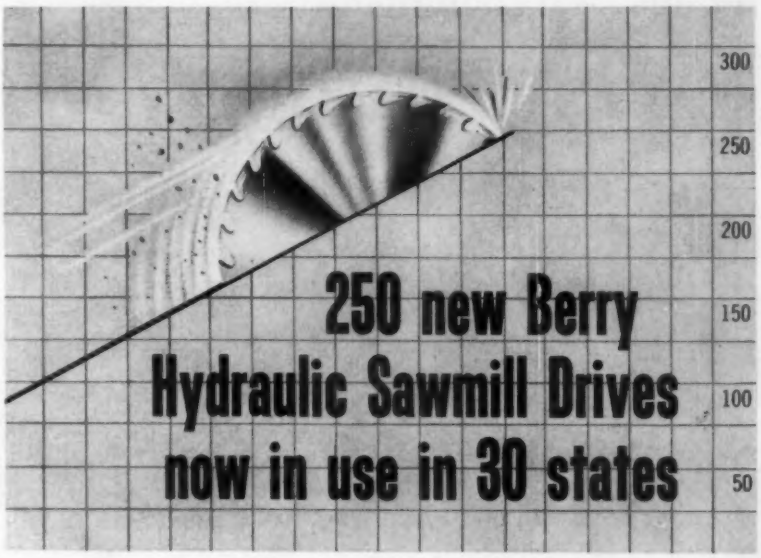
Larch-Douglas Fir

4/4 No. 3 Common S2 or 4S	$ 75.94
2x4 No. 1 Dimension RW&L	79.11
2x4 No. 2&Btr. Dimension RW&L	73.48

Koppers Names Managers For Western Plants

W. D. Pope has been named manager at Wauna, Ore., and E. A. Clendaniel has been picked as general manager of Everett, Wash., plant of Koppers Co., Inc., D. A. Mitchell, Pacific Coast district manager, reports.

Mr. Pope succeeds Guy E. Phillips at Wauna. Mr. Phillips becomes manager of the new plant Koppers is building at Whittier, Alaska. Mr. Pope was treating engineer at the Wilmington, Calif., plant. Mr. Clendaniel has been general foreman of the Feather River plant at Oroville, Calif.



Modern carriage drive using hydraulic power has advantages over other drives for band and circular mills

- Gets carriage "back in the hole" faster to increase production
- Available for any carriage weight and speed, from small circular mill to largest band mill
- Operates on individual electric motor or on "lazy horsepower" off the head rig power source
- Can be installed on your present drum-and-cable or combined with the Berry Hydraulic Shotgun for even greater efficiency
- Complete package units for new mills or conversions
- Each unit engineered to requirements of the individual mill
- Performance guaranteed as to lines per minute over specified stroke

Mail coupon today for a free survey of your mill

BERRY HYDRAULIC SAWMILL DRIVES

Berry Hydraulics
Division of Oliver Tyrone Corporation

Berry Hydraulics
Corinth 1, Miss.

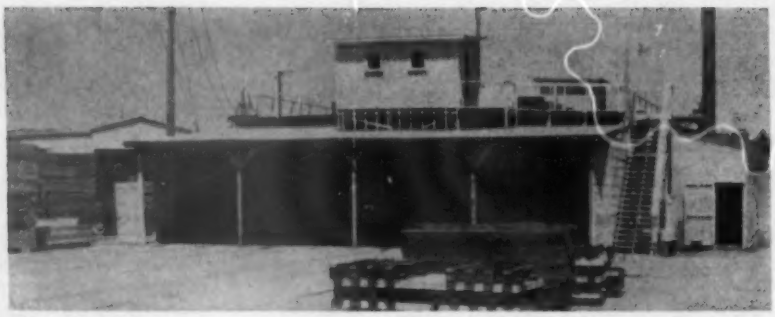
I would like complete details on the Berry Hydraulic Drive. Approximate carriage weight_____; present drive_____.

*Name*_____

*Company*_____

*Address*_____

_____



KILN BUILDING is 85x50 feet and houses two double track kilns. The building is built of pumice blocks and has wood roof. The kilns are end loading, Christopher designed.

ARMCO STEEL BUILDINGS Aid Mill "Up-Dating" Program

New steels are born at Armco

To keep pace with expanding business, owners of the C. M. Christiansen Co., of Phelps, Wisconsin, started a progressive up-dating program, which includes six Armco Steel Buildings to date.

These six Armco Buildings, ranging in size from 16 x 18 x 8 feet to 60 x 200 x 12 feet, total more than 21,600 square feet of unobstructed floor space for production and storage.

To see how precision-made, ready-to-erect Armco Steel Buildings can give you these advantages now and provide for future expansion, write or call today. Armco Drainage & Metal Products, Inc., 2180 Milvia Street, Berkeley 4, California or P. O. Box 751 Federal Station, Portland 7, Oregon.

ARMCO DRAINAGE & METAL PRODUCTS

Subsidiary of ARMCO STEEL CORPORATION

OTHER SUBSIDIARIES AND DIVISIONS: Armco Division • Sheffield Division
The National Supply Company • The Armco International Corporation
Union Wire Rope Corporation

Concentration Yard Stresses Quality

Approximately half a million feet a month is dried at B&D Dry Kiln, Inc., Redding, Calif., reports company president R. M. Moore. The company has been doing custom drying for 10 years.

A quality product is the aim at B&D and Mr. Moore explains that even though minimum drying time is desirable in a custom operation, quality comes first. Standard western pine schedules are used basically, but schedules are adjusted as dictated to achieve quality results.

This adjustment is particularly necessary because the company handles lumber from customers in different areas and thus the stock differs in texture and density. Species being dried are ponderosa pine, sugar pine, white fir, mahogany, incense cedar and Douglas fir.

Careful attention is given to selection of stock for kiln charges because of the variations in texture and density.

B&D makes use of frequent oven samplings as an aid in maintaining proper schedules, but excessive board sampling is eliminated as a result of getting accurate overall moisture content readings in the centers of the packages during drying. A 40″ handle on a tag moisture detector is used.

B&D packages are 44″ wide and 52″ high. The company dries random lengths but strives steadily to achieve a more uniform end product by keeping lumber to lengths as much as possible. Since the kilns are end loading, long lengths are not prohibitive. But, even so, B&D attempts to group the lengths on the kiln cars with no more than two lengths to a car.

Perhaps one factor not common in the industry is B&D's installation and use of forced exhaust in the kilns to bring in fresh air and force out moisture-laden air through the vents. The operation is automatic and is controlled by the kiln's Foxboro instruments. This innovation has proved especially beneficial in the drying of sugar pine in achieving complete absence of brown stain. The essential point about the exhaust system, Mr. Moore reports, is that a more precise schedule can be maintained.

The company does not specialize in any certain sizes of lumber, says Mr. Joe Hiatt, who is in control of the drying. B&D dries from 4/4 to 16/4.

Yard handling methods are not unique, but the company does use

portable pile bottoms. Subject to prevailing winds, the company changes its yard twice a year to accelerate or retard air drying of lumber awaiting kiln charging.

Steam for the kilns is supplied by a 150-hp West Coast low pressure boiler which employs a No. 2 and a No. 3 Ray oil burner. The burners are fully automatic.

The over-all B&D operating philosophy is best summed up by Mr. Moore: "We find that good common horse-sense and not being afraid to spend an extra few hours on a schedule has paid untold dividends in satisfied customers."

•

Saw Filers Room

(Continued from page 47)

inch wide or less is left on the saw.

(6) The width of the stripe determines the amount of tension at the front quarter or the degree of angle inward from the edge.

I am told that most American filers do their heat tensioning on a sharpener that leaves the so-called "tear drop" blue spots. I have found, however, that this method does not work on light, narrow band saws such as we use in Japan. I am also informed that heat tensioning is possible only on a saw that was first tensioned with a saw stretcher and not on a new one.

My method has proved successful on new saws. Through experience I have found that a 6-inch band saw requires only two or three rollings on the back half and only one rolling on a 4-inch saw. This amount of rolling gives a saw an adequate amount of tension and back crown.

Heat tensioned band saws need very little rolling, often none at all. Since the saw is heat tensioned after being leveled there is no need to worry about taking out lumps or ridges of a saw that does not lie flat of its own weight because of high tension.

The heat tensioned saw has much greater capacity than the rolled saw and keeps its tension much longer. It can be used until ground down to the heated blue stripe or in the case of a 5-inch saw down to a saw 2½ inches in width.

I want to say I am heartily satisfied with the methods I have developed and take pride in them.

•

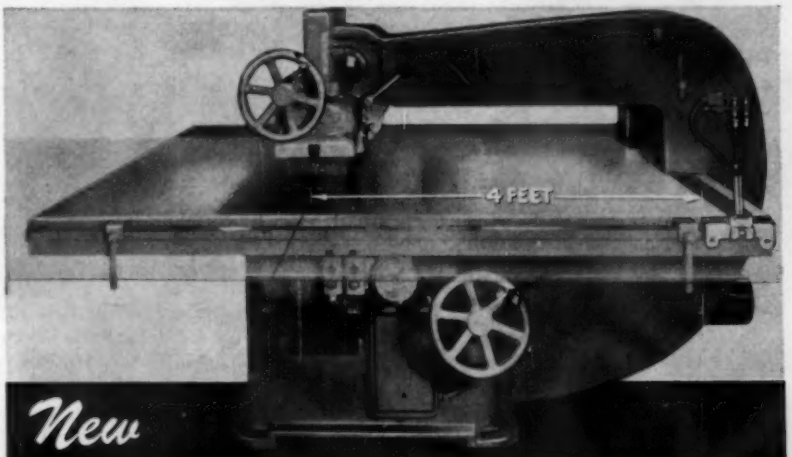
• Idaho Pine Co., Meridan, Ida., has filled its log pond and is now handling its logs dry with a loader.

Mill Builds Components

More than 100,000 board feet of West Coast Douglas fir construction lumber go into the production at the plant of Modular Components, Inc., Doraville, Ga. The plant is capable of turning out a variety of components—enough for complete structural units. One of the leading components built is trussed one-plane rafters. The company uses H-Brace couplings, and finds them to be strong, economical means of joining. B. V. McKinney is general manager at Doraville.

Sales Personnel Named

G. Noel Harrison has been appointed manager of lumber sales, export, for Rayonier Canada Ltd., formerly known as Alaska Pine & Cellulose, with head office in Vancouver, B.C. C. Gordon Tupper has been named manager, lumber sales, rail. Both men are graduates of the University of British Columbia and have been with the company for many years. Both are under the direction of T. Lloyd Roberts, president, Rayonier Canada Sales, Ltd.



New

EKSTROM, CARLSON

Wide Arm Rip Saw

The Model E Chain Feed Wide Arm Rip Saw has full 48" capacity on both sides of blade with rip fence in place for accurate sizing of 4' x 8' or more panels of all types of materials. Chain and pressure roll principle carries full size panels in multiple thickness through saw blade in parallel and straight line. Variable speed feeds are infinite from 56 to 225 FPM to provide correct feed speed. Adjustable, removable throat insert of soft metal eliminates sliver jams and protects saw blade. Stiffening collars support blade up to level of feed chain. Stock gauge is free floating and of "feather-touch" design.

Get other design and operating features. Write for complete data today or contact your local dealer.

For immediate information call:
Cascade Saw & Machinery
P. O. Box 179
Chehalis, Washington

EKSTROM, CARLSON & CO.
1429 RAILROAD AVENUE ROCKFORD, ILLINOIS

Pulpwood Skid Grapple Handles Half-Cord Loads

The new two-prong, 48-inch pulpwood skid grapple developed by International Harvester Co. for use with the Drott T-340, works on the same principle as employed in carrying an armful of fire wood. Lower arms are pushed into the wood pile while the top grab-arms lower and clamp the load securely. Then the load is rolled back and brought in close to the tractor to improve balance and facilitate transport.

When dumping the load, the operator merely releases the top arms and allows the wood to roll forward into place.

Pry-over-shoe break-out action enables the big skid-shoes, on the ground, to be used as a fulcrum and break logs loose from frozen down piles.

Maximum lifting capacity is 4800 pounds. Loading height is nine feet, 10 inches; forward reach seven feet, four inches. Maximum tip back at ground level is 33 inches. A two-prong, 28-inch unit for four-foot pulpwood is available.

Soderhamn Expands

Soderhamn Machine Manufacturing Co. has added more space to its manufacturing facilities at Talladega, Ala., to be used largely for an assembly department. The additional space allows installation of several new machine tools and more personnel. The company has also enlarged its engineering staff to keep pace with the growing demand for package sawmill and pulpwood debarking, chipping and screening installations.

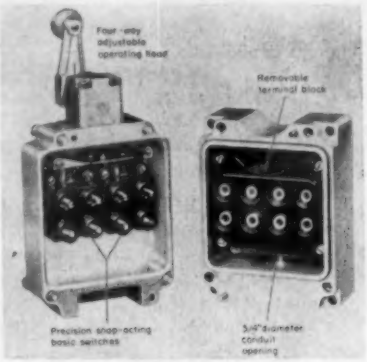
Pettibone Mulliken Adds Larger Tractor Shovel

The new Model PM-440 at 11,000-pound capacity, is the largest unit in a completely new line of Speedall tractor shovels now available from Pettibone Mulliken Corp., Chicago, Ill. The rubber-tired unit has a lifting capacity of 21,000 pounds, a breakout force of 24,800 pounds.

Depending upon weight of material being handled, buckets are furnished in S.A.E. heaped capacity of 3.00, 3.25, 3.90 and 4.25 cubic yards.

Bucket rollback at ground level is 40 degrees.

Standard equipment includes Pettibone Speedmatic power shift transmission, Pettibone planetary axles, Allison torque converter; 4-wheel hydraulic power assist brakes; dual hydraulic cylinder-assisted steering; 4-wheel drive; automatic bucket leveler and hydraulic system shock absorber.

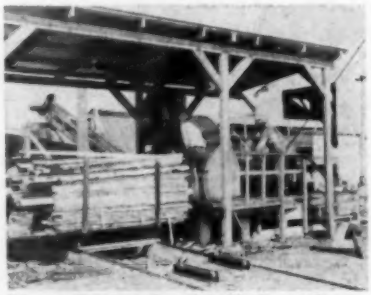


Plug-In Limit Switch Does Double Duty

Micro Switch of Freeport, Ill., a division of Minneapolis-Honeywell Regulator Co. says its new plug-in limit switch can in many situations do the work of two separate limit switches.

The new switch contains two 2-circuit double-break switches which can control four isolated circuits. The roller lever actuator, when moved to the left, operates one of these basic switches and, when moved to the right, operates the other. Operating characteristics are the same in either direction.

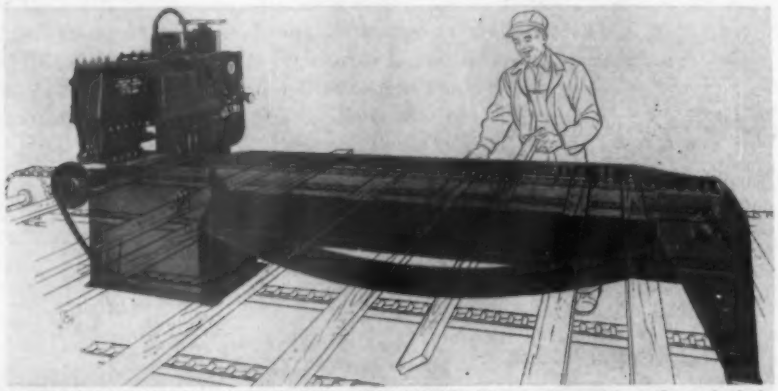
The basic switches and terminals are mounted in diecast aluminum housings. When properly connected to a sealed conduit, the complete assembly is oil-tight.



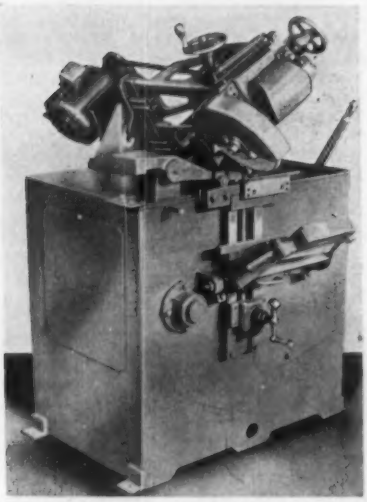
Unit Debarks Mill Residue: Slabs and Edgings

Portland Barkmasters, developed by John Jonson, master mechanic for Molalla Tie Co., Molalla, Ore., and Avison Lumber Co., and distributed by Portland Machinery Co., Portland, make it possible for a mill to remove bark from slabs and edgings so that they can be converted to chips.

The unit above is operating at Molalla Tie Mills, Molalla, Ore. It is working on white fir and hemlock slabs and edgings. Cost figures show maintenance on the machine to be 50 cents per unit.



STETSON-ROSS WT-100 AUTOMATIC GRADEMARKER. The grader positions the end of the board on the chain corresponding to its correct grade. As the boards pass by the grademarker, the correct printer is actuated by means of an electric eye. Pieces to be retrimmed are pulled out slightly beyond the chains, and they actuate a set of drop gates to drop out the trims on a takeaway belt.



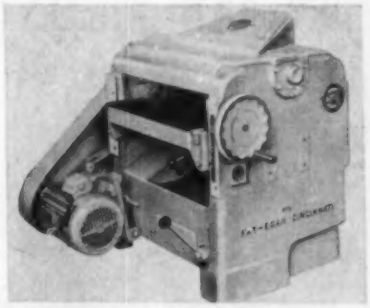
Band Saw Grinder Handles Many Depths, Spacings

The new Series "A" band saw grinding machine developed by Hanchett Manufacturing Co., Big Rapids, Mich., is available with attachments for full Universal saw sharpening applications.

The new attachments consist of a continuously variable lift adjusting mechanism and a continuously variable feed adjusting mechanism. The continuously variable adjustments are controlled by handwheels and adjustments may be made with the machines in operation.

With these attachments, the Series "A" machine will sharpen any depth or any spacing of regular band saw teeth without changing cams.

The variable adjustments can be furnished with the A-220, 12-inch capacity machine, A-230 14-inch machine and the A-240 16-inch machine.



24-Inch Single Surfacer Offered by Fay & Egan

The new No. 970 single surfacer features a 4-knife dynamically balanced round safety type cylinder for true planing action, even on heaviest cuts. Ball bearing mounting of rolls and 7½-hp motor assures smooth operations.

The machine surfaces one side up to 24 inches wide, eight inches thick, with two feeds, 27 and 42 fpm, available. Over-all length of the table is 32 inches; it is raised and lowered on large screws through a handwheel.

The cylinder, which revolves at 4500 rpm, is powered by a fan-cooled, totally enclosed, ball bearing motor, with V-belt drive. A magnetic starter provides overload and undervoltage protection.

A new type knife grinding attachment is available as optional equipment. This screw-type attachment, mounted on the machine at the factory, permits grinding of knives without their removal from the machine.

Illuminated Pushbutton Saves Time, Space

Square D's new illuminated pushbutton makes possible installation of a pushbutton and pilot light in a single step. This latest addition to Square D's line of oil-tight control units features pressure connectors to eliminate internal wiring. Terminals are clearly marked for easy wiring.

The Square D pushbutton has the same single hold mounting as other oil-tight units. A full range of voltage ratings and a choice of six color caps provide added versatility, Square D Co., Los Angeles, reports.

Sel-Set

. . . Another Carriage Automated by Sel-Set

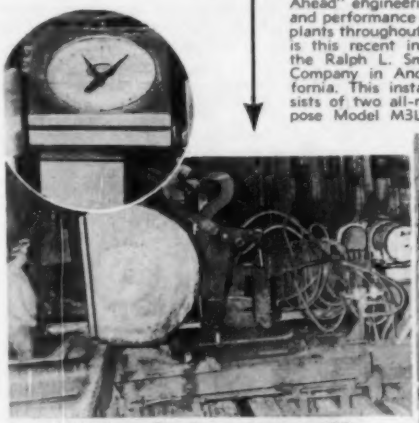
". . . Producing Accurate Lumber"

R. L. SMITH LUMBER COMPANY

ANDERSON, CALIFORNIA

Typical of the overwhelming acceptance of Sel-Set's "Years Ahead" engineering in design and performance by mills and plants throughout the country is this recent installation at the Ralph L. Smith Lumber Company in Anderson, California. This installation consists of two all-new, all-purpose Model M3LC Select-O-Matic Setworks installed on Sides 1 and 2 at the Anderson plant.

According to company personnel, the pre-set dial arrangement on the Model M3LC is an essential feature in their operation, assuring accurate cants and backing boards.



RALPH L. SMITH Lumber Company

January 13, 1960

Sel-Set Machinery Corp.
P. O. Box 1035
Salem, Oregon

Gentlemen:

The pictures show the "Sel-Set" installation on the big rig at our Anderson operations. This unit is doing a fine job in producing accurate lumber. We feel one of the most essential parts of this installation is the "pre-set" dial which assures accurate cants and backing boards. Our second unit is now in service at Anderson and we are planning a "Sel-Set" installation at our Wildwood plant during the Fourth of July shut-down.

We are sawing at least as much per hour now as prior to the installation, and our manufacture is more accurate than prior to the installation.

All in all, we feel these units are doing a good job and we are pleased with their performance.

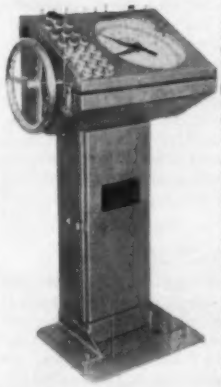
Yours very truly,

RALPH L. SMITH LUMBER COMPANY

Frank Blagen
Production Manager

FB:m

"Model M3LC" SELECT-O-MATIC®



Through continuing engineering advancements, Sel-Set, the leader in carriage automation, is able to offer the all-new, all-purpose Model M3LC Select-O-Matic. A Setworks designed for all mills, regardless of sawbox limitations, the M3LC is the only truly all-purpose remote control carriage setworks available. If you're looking for top performance and production . . . don't settle for less than the best. It will pay you to investigate Sel-Set Automation.

U. S. Patent Numbers 2574393, 2661036, 2661402, 584786, 2696853, 2888047, 2893448.
Canadian Patent Numbers 39470 - 1951, 502416 - 1954, 511025 - 1955, 514898-1955.

WRITE, WIRE OR PHONE FOR DETAILED INFORMATION AND PRICE QUOTATIONS:

Authorized Sel-Set Dealers and Distributors
Having Complete Sales and Service Facilities

THE WHELAND CO. — Chattanooga, Tennessee
GENERAL MACHY CO. — Spokane, Washington
KLAMATH MACHY CO. — Klamath Falls, Oregon
MILLER MACHY CO. — Missoula, Montana
NORTHEAST OHIO MACHINE BUILDERS — Columbiana, Ohio
FRED E. BARNETT CO. — Eureka, Ukiah, Sacramento, San Francisco

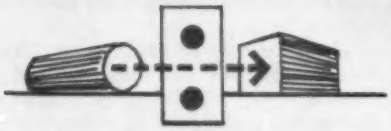
® Sel-Set and Select-O-Matic are the registered trademarks of Sel-Set Machinery Corporation

SEL-SET *Machinery Corporation*

290 Moyer Lane, P. O. Box 1035, Salem, Oregon, EMpire 3-3123

Available in Canada through Elworthy & Co., Ltd., Licensed Manufacturer, Vancouver, B. C.

SAWMILL AUTOMATION *is our business*



MATER

3 MATER ORGANIZATIONS *specialize in solving your sawmill problems*

1 *MATER ENGINEERING*

A firm of professional engineers specializing in sawmill design, automation, modernization and integrated plants.

2 *MATER MACHINE WORKS, Inc.*

Manufacturers of the complete line of MATER equipment for sawmills. World-known as the first in the field of automation sawmill machinery, and still the leader.

3 *MATER CONSTRUCTION CO.*

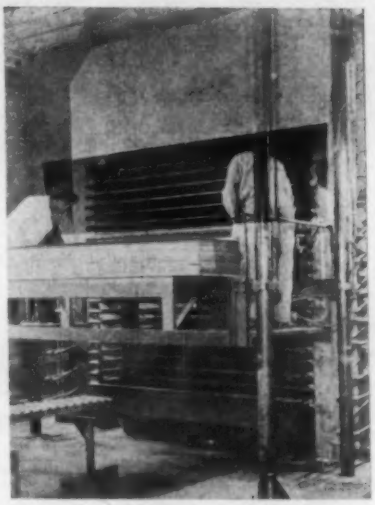
Construction of sawmills and forest products plants.

MATER PACKAGED AUTOMATION SAWMILL. These 3 organizations combined provide you with a complete turn-key automation sawmill.

Write, wire or call for specific information to all Mater organizations:

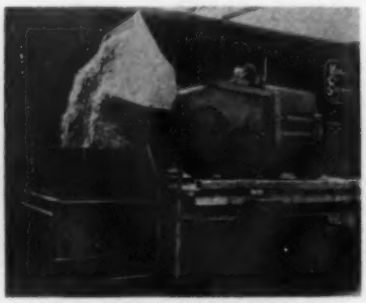
P. O. Box 410, Corvallis, Ore., U.S.A.
Phone: PLaza 3-7335

EQUIPMENT AT WORK



LAMB-GRAY HARBOR CO. Worked over plywood press at Nordic Plywood Co., Sutherlin, Ore., to increase the 15-opening capacity to 20. This increased production one-third without additional production cost. To take care of the additional openings, a hydraulic pump of increased capaciy was also installed.

* * *



ALLIS-CHALMERS Model TL-6 Tractoloader has speeded unloading of chips by 30% at International Paper Co., Spring Hill, La. The front end wheel unloader scoops up chips, turns in confined quarters and dumps loads directly into a hopper which moves the chips to the wood room. The short turning radius of the unit is imperative to the job as the machine must turn on a deck seven feet wide. Torque converter drive also speeds the operation, eliminating shifting, engine stalling and wheel spinning. As loading progresses, the compact Model TL-6 moves into the car.

* * *

HANSEL ENGINEERING CO. has built what is claimed to be the world's largest horizontal feed chipper to be installed at the bleached kraft pump mill of Celgar, Ltd., near Castlegar, B. C. It has a 154-inch disc and 40-inch spout. The machine is a modification of a 112-inch disc chipper designed by Hansel for B. C. Forest Products' kraft mill at Crofton, Vancouver Island, B. C. Hansel is also supplying a 112-inch chipper and 30- and 42-inch ring barkers for Celgar.

* * *

SEL-SET MODEL M3LC sawyer's controls from Sel-Set Machinery Corp., Salem, Ore., have been recently installed at Diamond National Corp., Red Bluff, Calif.; Ralph L. Smith Lumber Co., Anderson, Calif.; Michigan-California Lumber Co., Camino, Calif.; Collins Pine Co., Chester, Calif.; Weyerhaeuser Co., plants in Cottage Grove, Ore., and Enumclaw and Everett, Wash.; International Paper Co., Vaughn, Ore.; Willamette National Lumber Co., Foster, Ore., and Timber Products Co. of Oregon, Brownsville, Ore.

* * *

LORAIN 2-yard Moto-Loader Model ML-157 moves logs over the soft ground for Alicel Lumber Co. at Alicel, Ore. The front end loader is equipped with grapples for handling logs. It will later be fitted with a fork lift for moving finished lumber.

Longer Battery Life

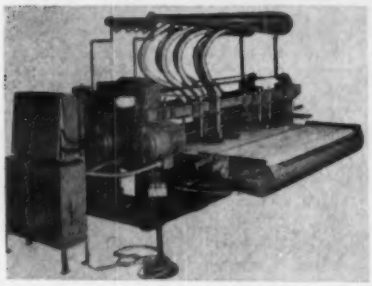
Cleaveland & Taylor, Inc., Philadelphia, Pa., has developed a battery vitalizer, called BA-100, which halts destructive effects of sulphation and corrosion within batteries and materially extends their operating life. Addition of BA-100 will permit batteries to work at minus 40 degrees and to operate at full efficiency at 160 degrees.

DRY KILN WHEELS

Royal Steel Dry Kiln Truck Wheels are the best designed and strongest wheels that can be put under a load of lumber. They'll wear longer, carry heavier loads and will not crush or break.

Specify* LOVSTED *wheels and get the best.

C. M. LOVSTED, INC.
4000 W. MARGINAL WAY, SEATTLE 6, WN.



Dual Arbors Cut Setup Time in Half

Main features of a new slat bed multiple cut-up saw engineered and built by Jenkins Machinery division of Kholer-Joa Corp., Sheboygan Falls, Wis., include:

- Dual overhead dado arbors for multiple splitting or grooving.
- Electric gearmotor lift for each arbor for quick, easy vertical adjustment.
- Individually spring-loaded rubber-wheel holddowns.
- Portable pedestal control panel.

Dual arbors allow two setups at one time. To change arbors, gearmotors quickly lift one out, lower other into work. Combination grooving and splitting using both arbors eliminates stocking two diameter saws. Portable pedestal panel puts control buttons at operator's fingertips regardless of load size or placement.

Handwheel adjustable fences on each side of bed permits double loading of smaller stock, again using either or both dado arbors.

Bed feed speeds are infinitely variable and the machine can be fed either behind or in front of dogs to suit job requirements.

•

YOURS FOR THE ASKING

ROTEX SCREENS. The complete line of Rotex screeners and the applications are presented in Bulletin 905 available from Orville Simpson Co., 1230 Knowlton St., Cincinnati 23, Ohio.

• • •

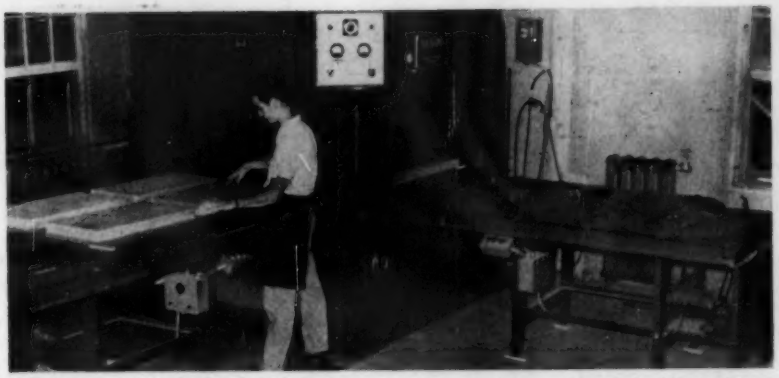
GAS POWERED FORK TRUCKS. Dimensional and engineering data on the Clarklift Yardlift 180L and 200 models are contained in Bulletin No. SS-1971 available from Clark Equipment Co., Battle Creek, Mich.

• • •

WOODWORKING MACHINE TOOLS. More than 60 different Greenlee tools for woodworking are listed in Bulletin No. M159-A available from Greenlee Tool Co., 2463 Herbert Ave., Rockford, Ill.

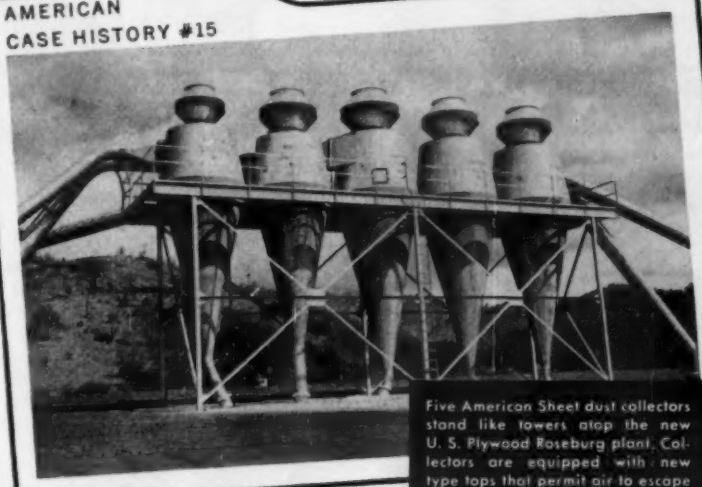
• • •

VENEER KNIVES. Results achieved by the use of Mirro-Keen veneer knives in a number of veneer mills are reported in Cutting Trends, a publication available from Simonds Worden White Co., 1101 Negley Place, Dayton 7, Ohio.



ONE-MAN PANEL-ON-FRAME PRESS by Raybond Electronics, Inc., Newton Highlands, Mass., features simplified operation. It is equipped with hopper feed glue spreader. The panel and rails which make up the frames are glued in one operation.

AMERICAN
CASE HISTORY #15



Five American Sheet dust collectors stand like towers atop the new U. S. Plywood Roseburg plant. Collectors are equipped with new type tops that permit air to escape vertically and keep moisture out.

U.S. Plywood selects American dust collecting systems

Two American blower systems handle the waste from two sanding systems. Waste is delivered to American surge hoppers where it is metered to a Rader high-pressure conveying system, which carries the waste 1400 feet to another American surge hopper adjacent to the boiler house.

Three American blower systems, which serve the cut-up and hog departments, plus the patch department and belt sanders, deliver the waste to American surge hoppers where the waste is metered into a Rader high-pressure relay system. This delivers the material to the fuel storage house.

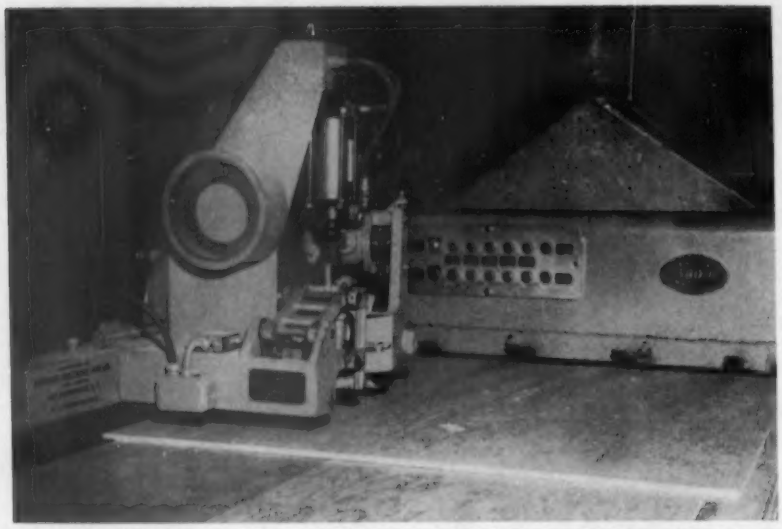
Should your plans include sheet metal work of any type, consult American. You'll be glad you did.

SOME OTHER PLYWOOD PLANT INSTALLATIONS BY AMERICAN SHEET METAL WORKS

WEYERHAEUSER LUMBER COMPANY.....COTTAGE GROVE, OREGON
DRAIN PLYWOOD COMPANY.....DRAIN, OREGON
DWYER LUMBER COMPANY.....PORTLAND, OREGON
DIAMOND LUMBER COMPANY.....TILLAMOOK, OREGON

AMERICAN MEANS EFFICIENCY

AMERICAN SHEET METAL WORKS, Inc.
Manufacturers of Blowers
920 NE Glisan Portland, Oregon BE 2-0111



PANEL FEEDING of The Pacific Coast Co.'s Yates-American S800 sander at Sonoma, Calif., is now done with a Durand Machine Works feeder. The automatic feeder was put into operation in 1959.

Valvair Announces New Solenoid Valve Line

A new line of Speed King basic ½-inch single and double solenoid plug-in type pilot-operated 4-way control valves features fast, automatic completion of electric and pneumatic circuit, Valvair Corp., Akron, Ohio, reports.

The line features new one-piece solenoid pilot housings and weight-saving aluminum bodies and sub-bases. All power connections, made permanently in manifold or sub-base, need not be disturbed for in-service maintenance.

Valve bodies and sub-bases are of heat-treated aluminum alloy, with stainless steel and caps and hard-chrome plated stainless steel stems.

•

1⅝-Cubic Yard Unit Added by Nelson Iron Works

The new Model 150 from N. P. Nelson Iron works was designed and built for extra heavy duty work. Features include:

- Underslung arms with 100% operator visibility and safety.
- 40 degree tipback bucket at ground level.
- Maximum dumping height, under bucket edge, of nine feet.
- Forward reach at seven feet dumping height is five feet, two inches.

An Allison Torqmatic full reversing transmission with a 3.5 to 1 stall ratio offers three speeds forward and in reverse ranging from 3.3 to 27 mph. The model 150 is powered by a Hercules G-298H, 107-hp gas engine or Hercules D-298H diesel. The gas model weighs 15,700 pounds, the diesel 15,900 pounds.

•

Caterpillar Adds New Line Of Wheeled Traxcavators

The new Cat No. 944 Traxcavator is designed with all lift arms and hydraulic cylinders ahead of the operator's compartment. This is the first rubber-tired loader "designed from the ground up" to solve this safety problem, Caterpillar says.

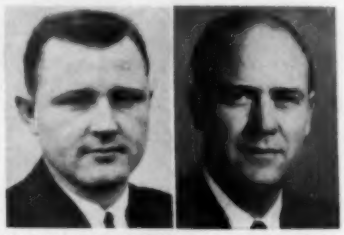
The unit pictured above is equipped with a lumber fork, one of the many attachments available. The adjustable tines are 2.5 by 4 inches and can be set at spacings of 40, 50, 60 and 70 inches. The standards are five feet high; fork weighs 1340 pounds.

Power is from either a gasoline or diesel engine. Both are rated at 105 net horsepower. Maximum rating of the D330 diesel engine used in the No. 944 is 135 horsepower.

PERSONALITIES

WILLIAM J. TOMFORD has been named general sales manager of Fan Air Systems, Memphis, Tenn. He most recently was associated with James E. Stark Co.

ROBERT HENDERSON is new chief engineer of Hyster-Sonnerdale, Ltd., distributing organization for Hyster Co. industrial trucks and tractor equipment manufactured in Australia. He transfers to the new job from the Portland, Ore., office where he was in the special products engineering department.



ROBERT HENDERSON R. C. PATTERSON

RICHARD C. PATTERSON has been appointed to the newly created position of forest products industry manager at Signode Steel Strapping Co. He has 16 years' experience in this line of work. He will coordinate sales and service to the forest products industry.

Two appointments have been announced by the Frick Co. W. L. FIBBEN becomes sales manager of the farm and sawmill division and JOHN R. KIESSLING becomes treasurer and control and a member of the board of directors. Fibben formerly was associated with Frick as assistant sales manager. He has also in the past worked for Soderhamn Machine Manufacturing Co. and American Saw Mill Machinery Co.

WILLIAM M. CRAMER has been named a district representative for the "Michigan" line of Clark Equipment Co. working in the New England and upper New York State area. He formerly sold earthmoving equipment in Detroit, Mich.

JACK F. LEWIS, vice-president, manufacturing, Hyster Co., has been named managing director of Hyster Ltd. in Scotland. He has also been elected a director of Hyster N. V., another Hyster subsidiary in Nijmegen, The Netherlands.

Eugene Knokey Promoted

Eugene R. Knokey has been elected vice-president and general manager of Diamond Lumber Co., Portland, Ore., and becomes a member of the board of directors.

Mr. Knokey has been with Diamond since 1953 when the firm started the manufacture of plywood at its Tillamook, Ore., plant. He served as superintendent of the plywood division from 1953 to 1956 and as manager of the plywood division since.

•

New Southern Warehouse

Fiddes-Moore & Co., a wholly owned subsidiary of Evans Products Co., Plymouth, Mich., has opened a building materials supply warehouse at Jasper, Fla., to serve mobile home manufacturers in Florida, Georgia, Alabama, South Carolina and southern parts of North Carolina and Tennessee. William Harriss, formerly Fiddes-Moore manager at Fort Worth, Tex., is in charge.

•

Firm to Sell Chips

National Plywood Co., Roseburg, Ore., soon will install a fuel hog and will be selling chips for the first time says general manager A. J. Standley. The plant recently put in a Fluckinger glue spreader and now works two spreaders against the press.

A Timesaver, Inc., sander is on order and will shortly be put in the plant's production line.

•

• Holly H. Holliday has been engaged as plant inspector and laboratory assistant for the Hardwood Plywood Institute laboratory at Arlington, Va. Mr. Holliday will cover the east coast and southern and northern areas of the United States, calling on HPI member plants to check for face grade and glue properties. He will work directly with William J. Groah, laboratory manager.

•

•Recently established W. S. Ricks Lumber Co., Natchez, Miss., is in production, cutting lumber from Delta hardwoods. Partners in the firm are Sam Fields, F. L. Callon, Lester Meng, Jr., J. C. Meng and W. S. Ricks.

•

• The third annual cooperative kiln drying short course will be held March 21-25 at the University of Illinois, Urbana, Ill. The first two courses were conducted at Southern Illinois University and Michigan State University.

Hardwood Plywood Institute Adds Three New Members

Liberty Veneer & Panel Co., Liberty, Tex., which produces 12 species of hardwood plywood using both hot and cold press facilities. W. A. Matthews is general manager.

Dominion Ayers Wood Products Co., Ltd., Lachute Mills, Quebec, Canada, which manufactures veneer and lumber core hardwood plywood, door skins and flushwood doors in birch and exotic woods. Gilbert E. Ayers is president.

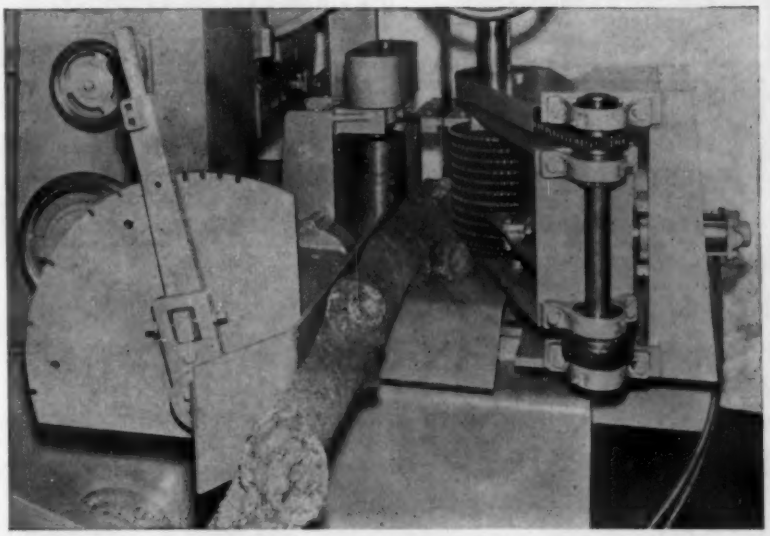
Bay Door Corp., Tampa, Fla., which produces door skins and stock size hardwood plywood panels. Fred F. Haddad is president.

•

Hugo Schmidt Retires

A lumber career that started on July 8, 1913, as a logging camp clerk at $50 a month for J. Neils Lumber Co. at Case Lake, Minn., has ended. Mr. Schmidt, well known for his long-time advocacy of the best sawmill practices and a continuing faith in lumber, has retired. Mr. Schmidt has been active in the management of Neils operations at Klickitat, Wash., since 1923.

New 54" STUB LINEBAR RESAW



NOW... INSTALL ONE LOW COST RESAW...
Resaw slabs, small split logs, flitches and cants

Even the roughest slabs feed through the saw without slipping or stalling.

Two power driven fence rolls and an 11" diameter power driven pivoting press roll that is tensioned by an air cylinder make easy work of feeding the roughest stock. Built-in slab table prevents feather edge slabs and flitches from hanging up.

Full range set lever opens fence to maximum of 6" inside saw line. Pivoting press roll opens to 12" outside saw line through foot operated air valve. Maximum depth of cut is 22". Feedworks is integral part of machine.

Five speed transmission drives feedworks from lower shaft eliminating separate expensive variable speed mechanism.

Rugged McDONOUGH construction throughout insures accuracy and long life. Available with 54", 62" or 6' wheels in right or left hand. Tilting feedworks and center sawing mechanism available as extra accessories.

For complete details of the NEW McDONOUGH Stub Linebar Resaws ask your McDONOUGH dealer or write for Bulletin SLB-54-1.

World's Largest Producer of Band Resaws

McDONOUGH MFG. CO.

1502 GALLOWAY • EAU CLAIRE, WISCONSIN

YOUR SOURCES OF SUPPLY — BUYERS GUIDE SECTION

(Commissionable)

1 to 44 inches per year-----$14.00 per column inch
45 to 89 inches per year----$12.75 per column inch
90 to 179 inches per year---$11.50 per column inch
180 to 359 inches per year--$10.50 per column inch
360 or more inches per year-$10.00 per column inch

PROFESSIONAL CARDS
(Not commissionable)
All cards set in uniform style—7/8" deep by 2¼" wide. $12.00 per column inch. Special rate: $125 for 13 one-inch card insertions if paid in advance, to run within 52-week period, without copy change.

CLASSIFIED—POSITIONS & HELP WANTED

(No agency discounts on classified space)

30c per word, $7.00 minimum; $2.00 additional for box number.
60c per word for Display (Boldface) Type.

Next issue, April, closing March 11th

ORIGINAL SCRAG MILL BUILDER
All types of Sawmill Equipment
Scrag Mills, Edgers, Stud Stackers, Sprayers, Plywood Oilers

for brochure write:
KEYSTONE MACHINE WORKS
P.O. Box 269 Roseburg, Oregon

CARTHAGE MACHINE CO. – CHIPPERS – WOOD ROOM EQUIPT.
HEPPENSTALL CO. – ALLOY CHIPPER & HOG KNIVES
RICE BARTON CORP. – PULP & PAPER MACHINERY
RAY SMYTHE CO.
511 Park Bldg. • 729 S.W. Alder St. • Portland 5, Ore. • Phone CApital 3-0502-2238

For booming and log rafting
LOWER COSTS WITH THE LOG BRONC

Read what this user has to say about the Nelson Log Bronc:

"We are now using two of your Log Broncs and are very well satisfied with their performance. These boom boats have materially reduced our dumping and rafting costs.

"We highly recommend the Nelson Log Bronc for the economical movement of logs."

signed, K.A. Adams, Cape Arago Lumber Co.

All steel welded construction for the toughest jobs. High powered outboard motor mounted for full 360 degree turns without reversing enables boat to push from all sides. Works in rivers, lakes, tidewater or ponds. Will save its cost in 90 days report many owners.
U. S. Patent No. 2844120 Canadian Patent No. 583126

NELSON LOG BRONC CO. *WRITE FOR ACTION MOVIE*
P. O. BOX 692 COOS BAY, OREGON COngress 7-2928

Shop Telephone: Call COngress 7-9262, Coos Bay, Oregon

Columbia Rubber Mills
Molded Rubber Products
Washers • Bushings • Gaskets • Rolls
12022 S.E. Powell Blvd.
Phone PR 4-4824
Portland 66, Ore.

Bartlett Electric Co.
Lloyd Bartlett, registered engineer
INDUSTRIAL—POWER—COMMERCIAL WIRING
EM 4-2244 Emergency Service
430 S. Church St., Salem, Ore.

FOR WILLIAMS-WHITE HOT PRESSES
ALLIED NW MACHINE TOOL CORP'N.
1222 S.E. 7th, Portland 7, Ore. BE 4-7513
PERINE MACHINERY & SUPPLY CO.
1921 1st So., Seattle, Wash. MA 2-2620
Complete Line of Machine Shop Tools—Lathes, drill dresses, saws, etc. Write for further information.

Skrag Mills, Resaws, Planers, Edgers
Feed Tables Line Bars
Breakdown Hoists
LUSTER ENGINEERING & MACHINE WORKS
3707 University Way
P. O. Box 67 Seattle 5, Wash.
Phone ME 2-1224.

FEDERAL PIPE & TANK CO.
Wood Pipe
2 inches to 16 feet diameter.
Wood Tanks
100 gallons to 500,000 gallons capacity.
6851 East Marginal Way
PArkway 2-0582 Seattle, Wash.

NEW OR USED...
HYSTER SALES CO. Has a Lift Truck for Your Particular Need

HYSTER
LIFT TRUCKS and STRADDLE TRUCKS
From 2,000 to 40,000-lb. capacities now available for immediate delivery.

As your Hyster Sales dealer, we are equipped to offer Complete Job Analysis of your lift truck needs; Complete Parts and Field Service; Modern Shop Facilities for major repairs; and our factory Trained Mechanics are field experienced to keep your equipment in top condition. Call Today.

In PORTLAND—CALL BE 4-6471
Hwy. 99E at S.E. 20th Ave.
5251 S.E. McLoughlin Blvd.
In MEDFORD—CALL SP 3-6360
654 South Grape Street
In BOISE, Idaho—CALL 3-5441

HYSTER Sales Company

ABRASIVES
The Norton Co., Worcester, Mass.; Los Angeles
Simonds Abrasive Co., Philadelphia, Pa.

ADHESIVES
American-Marietta Co., Seattle, Portland, New Westminster, B. C.
Borden Co., Chemical Division, New York City, Seattle
Chemical Process Company, Tacoma, Wash.; Redwood City, Calif.
Monsanto Chemical Co., St. Louis, Mo.; Springfield, Mass.; Seattle, Wash.; Santa Clara, Cal.
Quaker Oats Co., Chemical Div., Chicago, Ill.
Reichhold Chemicals, Inc., White Plains, N. Y.; Seattle; San Francisco; Port Moody, B. C.

AIR COMPRESSORS—AIR TOOLS
Gardner-Denver Co., Quincy, Ill.; Seattle, Portland; San Francisco, Denver, Dallas
Portland Machinery Co., Portland, Ore.

AIR MOTORS
Gardner-Denver Co., Quincy, Ill.; Seattle; Portland; San Francisco; Denver, Dallas
Salem Equipment & Supply Co., Salem, Ore.

APPRAISALS
Caldwell Machinery Co., Portland, Ore.
General Appraisal Co., Seattle; Portland; San Francisco; Los Angeles; Spokane, Wash., Vancouver, B. C.

AUTOMATIC SETWORKS
See "Setworks, Automatic"

AXLES
Axle Division, Eaton Mfg. Co., Cleveland, O.
Rockwell-Standard Corp., Transmission & Axle Div., Detroit, Mich.

BALING PRESSES
Consolidated Baling Machine Co., Brooklyn 15, New York

BARKERS
Ederer Engineering Co., Seattle, Wash.
Filer & Stowell Co., Milwaukee; Portland
L-M Equipment Co., Portland, Oregon
Nelson Electric Mfg. Co., Tulsa, Okla.
Nicholson Mfg. Co., Auburn, Wash.
E. V. Prentice Co., Portland, Ore.
Sumner Iron Works, Everett, Wn.; Vanc., B.C.
Soderhamn Machine Mfg. Co., Tallekega, Ala.; Portland, Oregon

BEARINGS
Bearing Sales & Service, Inc., Portland, Ore.; Seattle, Wash.
Dodge Manufacturing Corp., Mishawaka, Ind.
Link-Belt Co., Chicago, Seattle, Portland, San Francisco, Los Angeles, Spokane, Vanc., B. C.
Schafer Bearing Div., Chain Belt Co., Downers Grove, Ill.
Timken Roller Bearing Co., Canton, Ohio

BELTING and PACKING, Belt Accessories
B. F. Goodrich Co., Akron, Ohio; Portland, Seattle
Goodyear Tire & Rubber Co., Akron, Ohio; Portland; Seattle
Manhattan Rubber Div., Raybestos-Manhattan, Passaic, N. J.
Scougal Rubber Mfg. Co., Seattle, Wash.
Mechanical Rubber Goods Div.—U. S. Rubber Co., New York City, N. Y.; Atlanta, Ga.; Portland; San Francisco

BITS and SHANKS
E. C. Atkins Div. of Borg-Warner, Indianapolis, Ind.
R. Hoe & Co., New York; Portland, Birmingham, Ala.
Simonds Saw & Steel Co., Fitchburg, Mass.; Portland

BLOWPIPE SYSTEMS
American Sheet Metal Works, Inc., Portland
Anderson Blowpipe & Mfg. Co., Seattle, Wash.
Archer Blower & Pipe Co., Portland, Ore., and Seattle, Wash.
California Blowpipe & Steel Co., Inc., Escalon, Calif.
Medford Blowpipe Co., Medford, Ore.
Phelps Bros., Eugene, Ore.; Williams Lake, B.C.
Rader Pneumatics, Inc., Portland; Vanc., B.C.

BOILERS
F. E. Balden, Portland
Seattle Boiler Works, Seattle, Wash.

BOOM and TUG BOATS
L. S. Baier and Associates, Portland
Nelson Log Bronc Co., Coos Bay, Ore.
Nichols Boat Works Co., Hood River, Ore.

BRAKE BLOCKS, LININGS, DRUMS
Champion Friction Co., Eugene, Ore.
Raybestos-Manhattan Corp., Grey-Rock Div., Manheim, Pa.
World Bestos Corp., New Castle, Ind.

BRIQUETTE MACHINERY
Sumner Iron Works, Everett, Wash.

BURNERS—REFUSE
California Blowpipe & Steel Co., Inc., Escalon, Calif.
Medford Blow Pipe Co., Inc., Medford, Ore.
Phelps Bros., Eugene, Ore.; Williams Lake, B.C.

CARRIAGES—Riderless—automatic
Mater Machine Works, Corvallis
Mill Equipment, Inc., Seattle
Northeast Ohio Machine Bldrs., Columbiana, O.
Sel-Set Machinery Corp., Salem, Ore.

CARRIAGES
Albany Machine and Supply Co., Albany, Ore.
Corley Mfg. Co., Chattanooga; Portland
Filer & Stowell Mfg. Co., Milwaukee, Wis.
Klamath Iron Works, Klamath Falls, Ore.

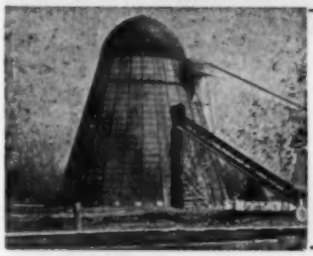
AIR & HYDRAULIC CONTROL EQUIPMENT
PUMPS • CYLINDERS • VALVES
HOSE ASSEMBLIES & FITTINGS
Immediate delivery from stock
Ray Bobbs AIR-DRAULICS, INC.
Belmont 2-6133 • 218 S. E. 12th Ave., Portland 14, Ore.

SEATTLE
3628 East Marginal Way
MAin 8629

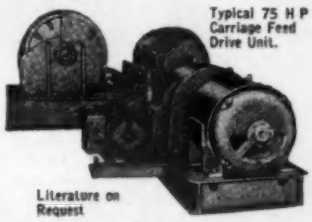
NORTHWEST CHAINS & SPROCKETS INC.

PORTLAND
31 N. W. 1st Avenue
CA 8-3367

JEFFREY MFG. CO. • WHITNEY CHAIN CO.
FABCO FLEXIBLE COUPLINGS • AMERICAN PULLEY CO.
EBERHARDT-DENVER Speed Reducers



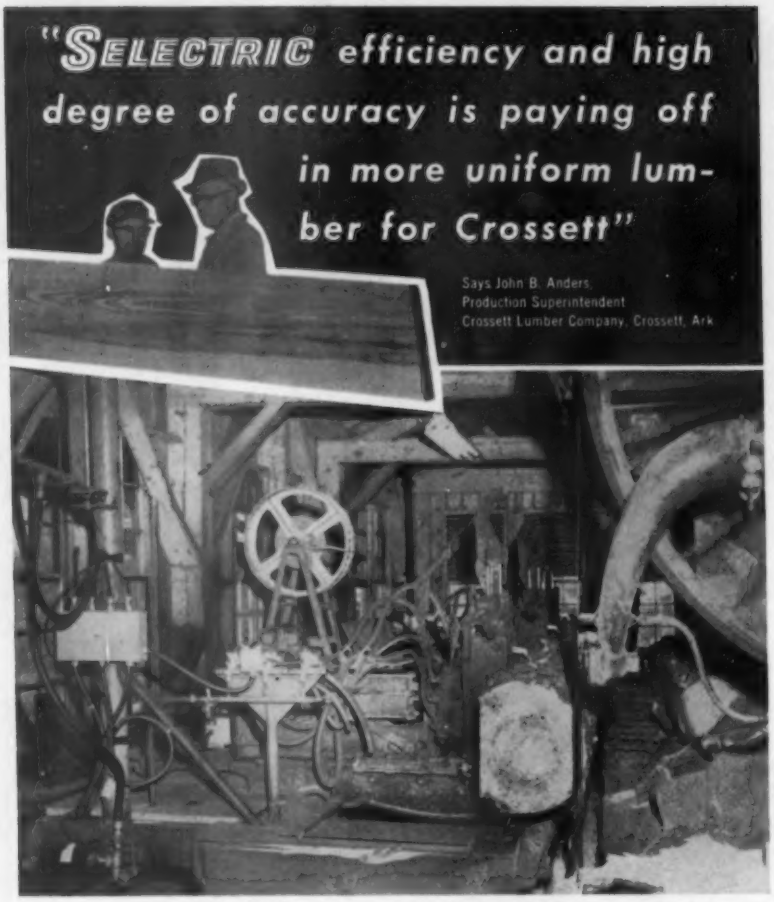
PHELPS BROS.
Refuse Burners
Blow Pipe Systems
1885 Highway 99 North
Eugene, Oregon
DI 4-5821
Phelps Burners, Ltd.
P O. Box 188 Williams Lake, B.C.



Typical 75 H P Carriage Feed Drive Unit.
Literature on Request

ZIDELL ELECTRIC DRIVES
Provide rugged D.C. variable speed performance for . . .
Carriages, Feed Roll Systems, Veneer Lathes, Tray Systems, Conveyors, Machine Tools, Etc.
ZIDELL MACHINERY & SUPPLY CO.
3121 S.W. MOODY STREET, Portland 1, Ore.
Distributors for: Delco & Brook Electric Motors Cutler-Hammer Controls

Western MACHINERY CORPORATION
EQUIPMENT FOR INDUSTRY
SPECIALISTS IN POWER TRANSMISSION SYSTEMS
46 Yrs.
1035 S. E. 9th Ave.
BE 6-4117
Problems Invited
Portland 14, Oregon
TWX PD 398


"SELECTRIC efficiency and high degree of accuracy is paying off in more uniform lumber for Crossett"
Says John B. Anders
Production Superintendent
Crossett Lumber Company, Crossett, Ark.

Recent Selectric Sales Include These Prominent Mills:

HUMBOLDT FIR, INC.
Hoopa, Calif.

E. H. LOVENESS TIMBER CO.
Bly, Oregon

McCLOUD RIVER LUMBER CO.
McCloud, Calif. (5 Units)

NEW ZEALAND FOREST PRODUCTS
Kinlieth, New Zealand

POTLATCH FORESTS, INC.
Kooskia, Idaho

TRINITY ALPS LUMBER CO.
Hayfork, Calif.

VESTAL LUMBER & MFG.
Erwin, Tenn.
Knoxville, Tenn.

WILLIS, ROGERS & PEARSON
Sedro Woolley, Wash.

Sawing 350,000 board feet of pine and hardwood per day, Crossett Lumber Company, Crossett, Arkansas, recently selected a 10 H.P. Heavy Duty Selectric setworks system in converting an existing 54" Filer and Stowell carriage to full sawyer control.

Production Superintendent John B. Anders, in commenting on Selectric performance characteristics, stated: "We are highly pleased with the efficiency of this setworks equipment, which we feel to be exceedingly accurate. Our Selectric system will enable us to make lumber considerably more uniform than was the case when we used a setter on this particular carriage."

Crossett's satisfactory experience with Selectric was repeated by 66 other mills last year—mills of all sizes, sawing all types of lumber. Why not make 1960 your year for Selectric. Your nearest Selectric representative will be glad to check over your operation and show you how Selectric can become a profit-making partner in your production plans.

SELECTRIC® *a product of*

MILL EQUIPMENT, INC.

5219 First Ave. So. Seattle 8, Wash.

Klamath Machine & Locomotive Works, Klamath Falls, Ore.
Klamath Machinery Co., Klamath Falls, Ore.
Mater Machine Works, Corvallis, Ore.
Mill Equipment Inc., Seattle
Northeast Ohio Machine Bldrs., Columbiana, O.
Prineville Machinery and Supply Co., Prineville, Ore.
Sel-Set Machinery Corp., Salem, Ore.

CARRIERS (also see Lift Trucks)
Gerlinger Carrier Company, Dallas, Ore.
Hyster Company, Portland; Seattle
Towmotor Corporation, Cleveland, Ohio

CASTINGS, Iron, Steel, Brass
Electric Steel Foundry Co., Portland; Seattle; San Francisco; Houston, Texas; Spokane, Wash.; Eugene, Ore.
Klamath Iron Works, Klamath Falls, Ore.
Klamath Machinery & Locomotive Works, Klamath Falls, Ore.
Link-Belt Co., Seattle; Portland; San Francisco
Western Foundry Co., Portland, Ore.

CHAIN, Log Haul
Portland Chain Mfg. Co., Portland

CHAIN, Steel Roller and Malleable
Chain Belt Co., Milwaukee, Wis.; Seattle; Portland; San Francisco; Vancouver, B. C.
Jeffrey Mfg. Co., Columbus, Ohio; Seattle; Portland
Link-Belt Co., Chicago, Seattle, Portland, San Francisco, Los Angeles, Spokane, Vanc., B. C.
Moline Malleable Iron Co., St. Charles, Ill.; Portland, Tacoma
Portland Chain Mfg. Co., Portland; Seattle; Bellingham

CHIP HANDLING Equipment
American Sheet Metal Works, Portland, Ore.
Archer Blower & Pipe Co., Seattle and Portland
Medford Blowpipe Co., Medford, Ore.
Rader Pneumatics, Inc., Portland; Vanc., B.C.

CHIPPERS
Carthage Machine Co., Carthage, N. Y.
D. J. Murray Co., Wausau, Wis.
Soderhamn Machine Mfg. Co., Portland, Ore.; Talladega, Ala.
Sumner Iron Works, Everett, Wash.

CHIP SCREENS
Carthage Machine Company, Carthage, N. Y.
Link-Belt Co., Chicago, Seattle, Portland, San Francisco, Los Angeles, Spokane, Vanc., B. C.
Soderhamn Machine Mfg. Co., Portland, Ore.

CLUTCHES
Dodge Manufacturing Corp., Mishawaka, Ind.

CONTROLS (air, hydraulic, electric)
Republic Electric & Development Co., Seattle
Valvair Corp., Akron, Ohio; Birmingham, Ala.; Seattle, Portland; San Francisco; Denver; Vancouver, B. C.

CONVEYORS
American Sheet Metal Works, Inc., Portland
Chain Belt Co., Milwaukee, Wis.; Seattle; Portland; San Francisco; Vancouver, B. C.
Electric Steel Foundry Co., Portland; Seattle, Spokane
Jeffery Mfg. Co., Columbus, Ohio
Link-Belt Co., Chicago, Seattle, Portland, San Francisco, Los Angeles, Spokane, Vanc., B. C.
Manhattan Rubber Div., Raybestos-Manhattan, Inc., Passaic, N. J.
Northeast Ohio Machine Bldrs., Columbiana, O.

COUPLINGS (also see hose and couplings)
Falk Corp., Milwaukee, Wis.

CRANES, Overhead
Ederer Engineering Co., Seattle
Harnischfeger Corp., Milwaukee, Wis.

CRANES, Truck, Wagon
American Hoist & Derrick Co., St. Paul, Minn.
Baldwin-Lima-Hamilton Corp, Lima, Ohio
Bucyrus-Erie Co., South Milwaukie, Wis.
Harnischfeger Corp., Milwaukee, Wis.
Insley Manufacturing Co., Indianapolis, Ind.
Koehring Co., Milwaukee, Wis.
R. G. LeTourneau, Longview, Tex.
Link-Belt Speeder Corp., Chicago, Ill.
Marion Power Shovel Co., Marion, Ohio
Northwest Engineering Co., Chicago, Ill.
Skagit Steel & Iron Works Sedro-Woolley, Wn.
Thew Shovel Co., Lorain, Ohio
Washington Iron Works, Seattle, Wash.

CUTTERHEADS
Disston Div., H. K. Porter Co., Inc., Seattle, Wash.; Philadelphia, Pa.
Jones & Orth Cutterhead Co., Seattle; Memphis, Tenn.

CYLINDERS, Air and Hydraulic
Salem Equipment & Supply Co., Salem, Ore.

DECK and POND SAWS
Disston Div., H. K. Porter Co., Inc., Seattle, Wash.; Philadelphia, Pa.
L-M Equipment Co., Portland, Ore.
Schurman Machine Works, Woodland, Wash.

DECK MACHINERY
Klamath Machinery Co., Klamath Falls, Ore.

DRIVES
Dodge Manufacturing Corp., Mishawaka, Ind.
Republic Electric & Development Co., Seattle
Western Gear Corp., Lynwood, Calif.; San Francisco; Seattle; Portland; Spokane; Denver; Houston; Dallas, Texas

DRY KILNS and DRIERS
Blo-R-Dry, Inc., Portland, Ore.

C. M. Lovsted & Co., Inc., Seattle, Wash.
Medford Blowpipe Co., Medford, Ore.
Medford Machinery Co., Medford, Ore.
Moore Dry Kiln Co., North Portland, Ore.; Jacksonville, Fla.
Standard Dry Kiln Co., Indianapolis, Indiana & Portland, Ore.

EDGE GLUING
Ederer Engineering Co., Seattle, Wash.
Elliott Bay Plywood Machines, Seattle, Wash.
Mann-Russell, Inc., Tacoma, Wash.
E. V. Prentice Machinery Co., Portland, Oregon
Stetson-Ross Machine Co., Seattle, Wash.

ELECTRICAL EQUIPMENT, Motors, etc.
Brook Motor Corp., Chicago, Ill.; Portland, Ore.
Northwest Syndicate (Mann-Russell), Tacoma, Wash.
Portland Machinery Co., Portland, Ore.
Republic Electric & Development Co., Seattle
Square D Company, Los Angeles, Calif.
Weaver Co., Charles, Detroit
Westinghouse Electric & Mfg. Co., East Pittsburgh, Pa.

ELECTRIC DC DRIVES
Republic Electric & Development Co., Seattle, Wash.; Peoria, Ill.; Vancouver, B. C.
Zidell Machinery & Supply Co., Portland, Ore.

END PRINTERS
Irvington Machine Works, Portland
Stetson-Ross Machine Co., Seattle

ENGINES, Gas and Diesel
Allis-Chalmers Mfg. Co., Buda Division, Chicago; Dallas, Tex.; San Francisco; Houston, Tex.
Caterpillar Tractor Co., Portland; Seattle; San Francisco, Peoria, Ill.
Cummins Engine Co., Columbus, Ind.; Seattle; Portland
Detroit Diesel Engine Div., General Motors Corp., Detroit, Mich.
Ford Motor Co., Dearborn, Mich.
Harnischfeger Corp., Crystal Lake, Ill.
Industrial Div., Chrysler Corp., Thenton, Mich.
International Harvester Co., Chicago; Portland; Seattle, San Francisco
Murphy Diesel Co., Milwaukee, Wis.
Waukesha Motor Co., Waukesha, Wis.; Los Angeles; Tulsa, Okla.
White Motor Co., Cleveland, Ohio

ENGINEERS, Forestry-Mill-Industrial
Guertin & Assoc. Ltd., Burnaby, B. C.
Industrial Development Co., Tacoma, Wash.
W. H. Rambo, Portland, Ore.
William K. Stametz, Jr., Engineering, Columbiana, Ohio
Timberman's Engineering Co., Portland, Ore.

FANS & BLOWER SYSTEMS
Archer Blower & Pipe Co., Portland, Ore. and Seattle, Wash.

The most modern DRY KILN today . . . with tomorrow's design

WILSON DRY KILN COMPANY

BOX 127 POST FALLS, IDA.

$$$ MAINTENANCE PROBLEMS? $$$

★ **GLUE LINES**—Jamesbury Ball Valves
★ **CHIPPER FEED SYSTEMS**—(We Design Special Belts)
★ **CONVEYOR DRIVES**—Bauer Totally-Enclosed Motorized Pulleys
★ **VENEER TRAY SYSTEMS**—(Special Veneer Belts)
★ **STEAM LINES**—Sarco, Armstrong Traps, Barco Joints, ACF, Jenkins, Fairbanks, Jamesbury Valves Ball, Globe, Gate Valves

GOODYEAR RUBBER & SUPPLY CO.

A consolidation of Harris Supply Co. and Goodyear Rubber & Asbestos Co.

SERVICE SINCE 1893

205 N. W. 5th Ave., Portland 9, Oregon
Telephone: CApitol 6-6671

ARCHER BLOWER can "Do the Job"

• DUST COL. SYSTEMS • PNEUMATIC CHIP HANDLING SYS.
• SPECIALTY ITEMS • CUSTOM METAL FAB. • REPAIR SERVICE

SINCE 1900

Archer Blower & Pipe Co., Inc.

2 PLANTS | Portland, Ore.—6141 S.W. Macadam—CHerry 6-3308
Seattle, Wash.—9500 E. Marginal—PArkway 5-4003

Improve YOUR Mill Operation

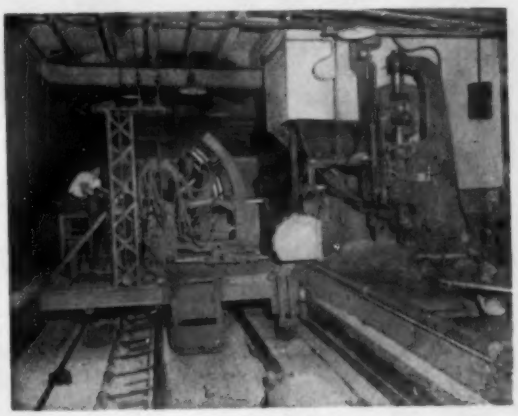
EXISTING EQUIPMENT CAN BE IMPROVED TO MODERN STANDARDS BY WELL ENGINEERED REBUILDING

KLAMATH IRON WORKS

P.O. Box 129 Klamath Falls, Ore.
TU 4-7721

KLAMATH IRON WORKS

Representatives:
United States Machinery Co., New York, N. Y.
Washington Mach. & Supply Co., Spokane, Wash.
Electric Power Equipment Ltd., Vancouver, B. C.



This photograph shows the new carriage recently furnished by Klamath Iron Works and one of three old style band mills that was completely modernized for a large pine mill in eastern Oregon.

The Klamath Iron Works has the engineering and plant facilities and knowhow to aid you to modernize your present plant.

Let Us Tell You About This

Original designers and builders

Professional Services

R. GUERTIN & ASSOCIATES LTD.
CONSULTING ENGINEERS
Specializing in veneer and plywood plants, sawmills, structural engineering, production development in wood manufacturing plants.
1016 S. W. Marine Tel. AM 6-2940
Vancouver, B. C.

F. E. BALDEN COMPANY
Mechanical Contractors
122 S. W. First Ave.
Portland 4, Ore.
Phone: CApitol 8-5652

THOMPSON & HOLMBERG INC.
CONSULTANTS
Wood Working Plants
Sawmills, Veneer, Planing Mill, Wood Rooms, Barking & Chipping Installations
Terminal Sales Bldg.
Phone CApitol 8-1965 Portland 5, Oregon

TIMBERMAN'S ENGINEERING CO.
CIVIL — MECHANICAL ENGINEERS
916 N.E. 25th Ave.
Portland, Oregon BEImont 4-0424

INDUSTRIAL DEVELOPMENT CO.
Dale L. Schubert, Engineering — Designers and Consultants for
HARDBOARD, CHIP & FLAKEBOARD AND OTHER WOOD UTILIZATION PLANTS
Development and mock-up facilities
3848 South Pine TACOMA 9, WASH. Ph. GReenfield 2-4413
Serving industry on a national and international basis

FOR SAWMILLS SEE
M. A. WARD
CONSTRUCTION CO., INC.
391 E. Third Avenue • Eugene, Oregon
Phone: DI 4-5531

MATER ENGINEERING
Professional consulting engineers for the forest products industry.
Sawmill automation, design, modernization, integrated plants, complete technical and economic studies.
P. O. Box 410 Corvallis, Oregon
Phone Plaza 3-7335

FILES
E. C. Atkins Div., Borg Warner, Indianapolis; Portland
Disston Div., H. K. Porter Co., Inc., Seattle, Wash.; Philadelphia, Pa.
Nicholson File Co., Providence, R. I.
Simonds Saw & Steel Co., Fitchburg, Mass.; Portland
Spear & Jackson Ltd., Vanc., B. C.; Eugene

FILING ROOM MACHINERY and SUPPLIES
Armstrong Mfg. Co., Portland, Ore.
Hanchett Mfg. Co., Big Rapids, Mich.; Portland
Newman Machine Co., Inc., Greensboro, N. C.
Nielsen's Saw & Mfg. Co., Roseburg, Ore.
S. A. Woods Machine Co., Boston; Portland; Memphis, Tenn.; San Mateo, Calif.

FRICTION BLOCKS
Champion Friction Co., Eugene, Ore.

GANG SAWMILLS
Corley Mfg. Co., Chattanooga; Portland
Dominion Bridge Co., Vancouver, B. C.
Gang Saw Sales, Spokane, Wash.
Jeddeloh Bros., Inc., Gold Hill, Ore.
Monarch Forge & Machine Co., Portland, Ore.
Portland Machinery Co., Portland, Ore.
Soderhamn Machine Mfg. Co., Portland, Ore.
Sumner Iron Wks., Everett, Wash.
Western Steel & Foundry Co., Dallas, Ore.

GEARS
Sheridan Gear & Mfg. Co., Portland, Ore.

GEARS and GEAR MOTORS and SPROCKETS
Falk Corp., Milwaukee, Wis.
Link-Belt Co., Chicago, Seattle, Portland, San Francisco, Los Angeles, Spokane, Vanc., B. C.
J. W. Minder Chain & Gear Co., Portland; Los Angeles
Sheridan Gear & Mfg. Co., Portland, Ore.
Western Gear Corp., Lynwood, Calif.; San Francisco; Portland; Seattle; Spokane, Denver; Dallas and Houston, Texas
Western Machinery Corp., Portland

GRADE MARKING EQUIPMENT
Irvington Machine Works, Portland
Stetson-Ross Machine Co., Inc., Seattle

GRINDING WHEELS
Norton Co., Worcester, Mass.

GUIDE SETWORKS
M. A. Ward Const. Co., Inc., Eugene, Ore.

HARDBOARD plant equipment
American Mfg. Co., Tacoma; Vancouver, B. C.
Greenlee Bros. & Co., Rockford, Ill.; Seattle; San Francisco; High Point, N. C.
Grenco, Inc., Seattle, Wash.; Portland
Washington Iron Works, Seattle, Wash.

HOG, CRUSHERS, PULVERIZERS
D. J. Murray Mfg. Co., Wausau, Wis.
Portland Machinery Co., Portland
E. V. Prentice Co., Portland, Ore.
Sumner Iron Wks., Everett, Wash.

HOSE and HOSE COUPLINGS
Aeroquip Corp., Jackson, Mich.; Greensboro, N. C.; Portland; Burbank and Los Angeles; Dallas, Texas
Goodyear Rubber & Asbestos Co., Portland
B. F. Goodrich Co., Akron, Ohio
Goodyear Tire & Rubber Co., Akron, Ohio
Pacific Marine Supply Co., Seattle
Manhattan Rubber Div., Raybestos-Manhattan, Inc., Passaic, N. J.
Mechanical Rubber Goods Division, U S. Rubber Co., New York City; Atlanta, Ga.; Portland; San Francisco

HYDRAULIC & AIR EQUIP.
Bobbs Air-Draulics, Inc., Ray, Portland, Ore.

INSTRUMENTS
Moore Dry Kiln Co., No. Portland, Ore.; Jacksonville, Fla.; Vancouver, B. C.

KILN COATINGS
Gilsonite Co., Portland, Ore.

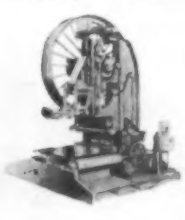
KILNS and DRIERS (See Dry Kilns & Driers)

KNIFE GRINDING MACHINERY
Hanchett Manufacturing Co., Big Rapids, Mich.; Portland

KNIVES, planer, hog, veneer, chipper
E. C. Atkins Division, Borg Warner Co., Indianapolis
Cascade Saw & Tool Co., Chehalis, Wash.
Disston Div., H. K. Porter Co., Inc., Seattle, Wash.; Philadelphia, Pa.
Heppenstall Co., Pittsburgh, Pa.
Jones & Orth Co., Seattle
Ohio Knife Co., Cincinnati, Ohio; Portland

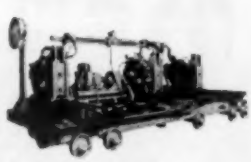
WRITE FOR INFORMATION ON ANY OF THESE MONARCH MACHINES

Monarch 5 to 9-ft. Bandmills



Monarch
Forge & Machine Works, Inc.
2130 N. W. York St., Portland 10, Ore. — CA 7-0631
Ask about Monarch Lumber Thickness Sorter

Sawyer Controlled Carriage



Simonds Saw & Steel Co., Fitchburg, Mass.; Portland
Ray Smythe, Portland
Spear & Jackson Ltd., Vancouver, B. C.; Eugene, Ore.
Wapakoneta Machine Co., Wapakoneta, Ohio

KNOT SEALERS
Western Machinery Corp., Portland, Ore.

LIFT TRUCKS
Buda Div., Allis-Chalmers Mfg. Co., Milwaukee
Clark Equipment Co., Ind. Truck Div., Battle Creek, Mich.; Seattle; Portland; San Francisco
Gerlinger Carrier Co., Dallas, Ore.
Hyster Company, Portland; Seattle
Hyster Sales Co., Portland, Oregon
Towmotor Corporation, Cleveland, Ohio

LOG HAULS
Klamath Machinery Co., Klamath Falls, Ore.

LOG STACKERS
R. G. LeTourneau, Inc., Longview, Texas
Caterpillar Tractor Co., Portland; San Francisco; Seattle; Peoria, Ill.
International Harvester Co., Chicago; Portland

LUMBER CARRIERS AND LIFT TRUCKS (See "Lift Trucks" & "Carriers")

LUMBER CONVEYORS
Lawson Stacker Co., Memphis, Tenn.

LUMBER FINANCING
Douglas-Guardian Warehouse Corp., New Orleans; Portland; Los Angeles; San Francisco

LUMBER STACKERS, UNSTACKERS, LOADERS AND HOISTS
Lawson Stacker Co., Memphis, Tenn.
Lovsted & Co., Inc., C. M., Seattle, Wash.
Moore Dry Kiln Co., Vancouver, B. C.; Brampton, Ont.; Jacksonville, Fla.; North Portland
Stetson-Ross Machine Co., Seattle

MACHINERY APPRAISALS
Caldwell Machinery Co., Portland, Ore.

MACHINERY LIQUIDATORS
Clyde Carroll Machinery Co., Portland, Ore.

MOISTURE METERS & CONTROL EQUIPMENT
Laucks Sentry Products, Seattle, Wash.

MOTORS — AC
Bartlett Electric Co., Salem, Ore.
Zidell Machinery & Supply Co., Portland, Ore.

OILS and LUBRICANTS and FUELS
Calor Gas Co., San Francisco
Lubriplate Division, Fiske Bros. Refining Co., New York City
Mobil Oil Co., Los Angeles, San Francisco, Seattle
Richfield Corp., Los Angeles
Shell Oil Co., Portland; Seattle; Tacoma, Spokane; San Francisco; Vancouver, B. C.
Standard Oil Co. of California, San Francisco
Suburban Gas Service-Propane-Portland, Ore.; Redi-Gas-Propane-Tacoma, Wash.
The Texas Corporation, New York City
Tidewater Associated Oil Co., San Francisco
Union Oil Company, Los Angeles

OUTBOARD MOTORS
Evinrude Motors, Milwaukee, Wis.
Johnson Motors, Chicago, Ill.

PAPER PRODUCTS
Crown-Zellerbach Corp., Portland; San Francisco; Seattle

PETROLEUM-LIQUID
Suburban Gas Service-Propane-Seattle, Wash.; Portland, Ore.; Redi-Gas - Propane - Tacoma, Wash.

PIPE, corrugated, culvert, welded
Armco Drainage & Metal Products, Inc., Middletown, Ohio; Berkeley, Calif.; Seattle; Spokane; Atlanta; Denver; Houston, Texas; Guelph, Ontario, Canada
Beall Pipe & Tank Corp., Portland

PLANING MILL MACHINERY & EQUIPMENT
G. M. Diehl Machine Co., Inc., Wabash, Ind.
Greenlee Bros. & Co., Rockford, Ill.; Seattle; San Francisco; High Point, N. C.
Irvington Machine Works, Portland
Max Mfg. Co., San Jose, Calif.
Mereen-Johnson Machine Co., Minneapolis
Newman Machine Co., Inc., Greensboro, N. C.
Portland Machinery Co., Portland, Ore.
Stetson-Ross Machine Co., Inc., Seattle
S. A. Woods Machine Co., Boston; Portland; Little Rock; Memphis; San Mateo, Calif.
Yates-American Machine Co., Beloit, Wis.; High Point, N. C.; Memphis; Portland

PLY. & VENEER MACHY. & SUPPLIES
American Mfg. Co., Tacoma, Wash.; Vanc., B.C.
Ardies Machy. & Sales Co., Portland, Ore.
Chas. F. Bamford, Portland, Ore.
Clyde P. Carroll Machy. Co., Portland, Ore.
Cascade Saw & Machine Co., Chehalis, Wash.
Coe Mfg. Co., Painesville, Ohio; Portland
Columbia Press Div., Lodge & Shipley, Hamilton, Ohio
Elliott Bay Plywood Machines Co., Seattle
Elford Plywood Corp., Portland, Ore.
Ederer Engineering Company, Seattle
Globe Manufacturing Co., Tacoma, Wash.
Greenlee Bros. & Co., Rockford, Ill.; Seattle; San Francisco; High Point, N. C.
Jackson Industries, Birmingham, Ala.; Portland
Kenton Machine Works, Portland, Oregon
Kimwood Machine Co., Cottage Grove, Ore.
Kohler-Joa Corporation, Sheboygan Falls, Wisc.; Chehalis, Wash.
L-M Equipment Co., Portland
Lamb-Grays Harbor Co., Hoquiam, Wash.
Mattison Machine Works, Rockford, Ill.
Merritt Solem Corp., Lockport, N. Y.

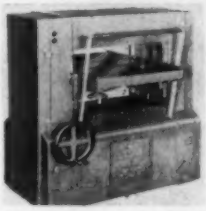
W. H. RAMBO
Industrial Plant Engineer

Layout Estimates, Design, Reports, Construction Supervision

SPECIALIZING IN: Sawmills, Barking and Chipping Installations, Plywood Plants, Hardboard Plants, Woodworking Plants, Planing Mills, Power Plants and Dry Kiln Installations.

Loyalty Bldg. Portland 4, Oregon
CApitol 3-5101

I'm the new
MAX FORSBERG



24 x 8"
PLANER

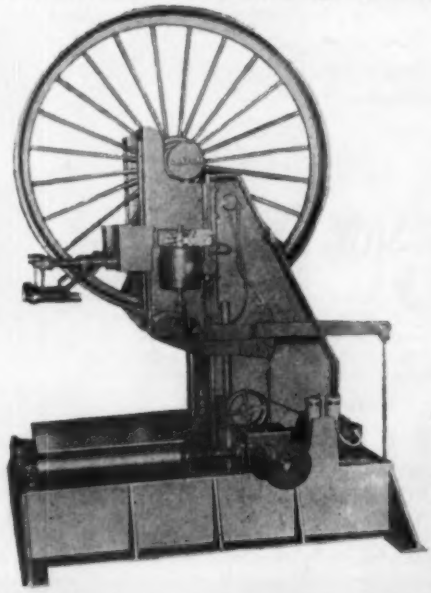
Put me to work in *YOUR* plant and . . .

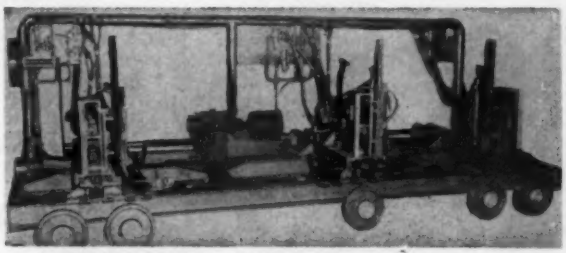
I'll give you a full day's work plus all the fringe benefits. For details of my rugged construction and advanced design features, drop a line to my builder

MAX MANUFACTURING CO.
138 Stockton Ave., San Jose 26, Calif.
Builder of Quality Industrial Machinery for over 20 years.

SALEM EQUIPMENT
MAKES LUMBER BETTER GRADE

Salem Anti-Friction Bearing Band Mill





Pre-determined Automated Carriage

Write for Illustrated Folder on All Types of Sawmill Machinery

Salem Equipment & Supply Co.
EARL R. HITCHMAN, Pres.
3371 D St. N.E. • Salem, Oregon
PHONE EMpire 4-4737

Moore Dry Kiln Co., Portland
Mereen-Johnson Co., Minneapolis
Northwest Syndicate (Mann-Russell), Tacoma, Wash.
Peninsula Iron Works, Portland
Portland Iron Works, Portland
E. V. Prentice Company, Portland
Reichhold Chemicals, Inc., New York City
Republic Electric & Development Co., Seattle
Siempelkamp Co., Krefeld (Germany)
Skoog Engineering Co., Olympia, Wash.
Solem Machine Co., Rockport, Ill.
Star Machinery Co., Seattle, Wash.
Veneer Machines Div., Jackson Industries, Birmingham, Ala.
Washington Iron Works, Seattle, Wash.
Wapakoneta Machine Co., Wapakoneta, Ohio
Western Machinery Corp., Portland
Wilco Machine Works, Memphis, Tenn.
Williams-White & Company, Moline, Ill.
R. D. Wood Company, Philadelphia, Pa.
Yates-American Machine Co., Beloit, Wis.; High Point, N. C.; Memphis; Portland

POLE SHAVERS & PROCESSING SYSTEMS
Nelson Electric Mfg. Co., Tulsa, Okla.

POND BOATS
Nelson Log Bronc Co., Coos Bay, Oregon
Nichols Boat Works, Hood River, Ore.

POWER PLANT EQUIPMENT
Seattle Boiler Works, Seattle

PRESSES, hydraulic, hot plate, cold
Allied Northwest Machine Tool Corp., Portland
Columbia Division, Lodge & Shipley Co., Hamilton, Ohio
Star Machinery Co., Seattle, Wash.
Washington Iron Works, Seattle
Williams-White & Co., Moline, Ill.
R. D. Wood Company, Philadelphia, Pa.

RADIO and RADIO EQUIPMENT
Motorola Inc., Chicago, Ill.

REFUSE BURNERS
Anderson Blowpipe & Manufacturing Co., Seattle
Archer Blower & Pipe Co., Portland, Ore., and Seattle, Wash.
Phelps Bros., Eugene, Ore.
Seattle Boiler Works, Seattle

ROLLS, rubber
Columbia Rubber Mills, Portland
Kenton Machine Works, Portland

ROOF COATINGS
Gilsonite Co., Portland, Ore.

RUBBER SPECIALTIES
Columbia Rubber Mills, Portland
Kenton Machine Works, Portland
Raybestos-Manhattan, Inc., Manhattan Rubber Div., Passaic, N. J.
Scougal Rubber Mfg. Co., Seattle

SANDERS
Max Mfg. Co., San Jose, Calif.

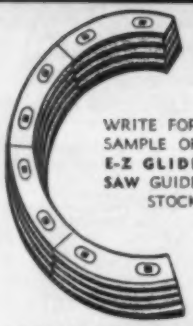
SAPSTAIN APPLICATORS
Keystone Machine Works, Roseburg, Ore.

SAW GUMMERS
Norton Co., Worcester, Mass.

SAWS, SAW CHAINS, KNIVES, CUTTERHEADS
Atkins Saw Division, Borg-Warner, Indianapolis, Ind.; Portland; Seattle; Los Angeles; Chattanooga, Tenn.
Caldwell Machinery Co., Portland, Ore.
Cascade Saw & Machine Co., Chehalis, Wash.
R. Hoe & Company, New York City; Seattle; Birmingham, Ala.; Portland
Jones & Orth, Seattle; Memphis
Ohio Knife Company, Seattle; Portland; Oakland; Cincinnati
Pacific Saw & Knife Co., Portland; Los Angeles
Simonds Saw & Steel Co., Fitchburg, Mass.; Portland
Spear & Jackson Ltd., Vancouver, B. C.; Eugene, Ore.

SAW GUIDES
Champion Friction Co., Eugene, Ore.

SAWMILL MACHINERY and EQUIPMENT
Albany Machine and Supply Co., Albany, Ore.
Caldwell Machinery Company, Portland
Clyde Carroll Machinery Co., Portland, Ore.
Corley Mfg. Co., Chattanooga, Tenn.
Dominion Bridge Co., Ltd., Vancouver, B. C.
Electric Steel Foundry Co., Portland; Seattle; San Francisco; Houston, Texas; Eugene, Ore.; Spokane, Wash.
Goldstein & Bloch, Aberdeen, Wash.
Irvington Machine Works, Portland
Jedeloh Bros., Gold Hill, Ore.
Keystone Machine Works, Roseburg, Ore.
Klamath Iron Works, Klamath Falls, Ore.
Klamath Machine & Locomotive Works, Klamath Falls
Kliever Machine Co., Medford, Ore.
Kohler-Joa Corporation, Sheboygan Falls, Wisc.; Chehalis, Wash.
L-M Equipment Co., Portland, Ore.
Lovsted & Co., Inc., C. M., Seattle, Wash.
Mater Machine Works, Corvallis
McDonough Mfg. Co., Eau Claire, Wis.
Mereen-Johnson Machine Co., Minneapolis
Mill Equipment, Inc., Seattle
Monarch Forge & Machine Works, Portland
National Machinery Sales, Gold Hill, Ore.
Newman Machine Co., Greensboro, N. C.
Northeast Ohio Machine Bldrs., Columbiana, O.
Portland Chain Mfg. Co., Portland; Seattle; Bellingham, Wash.
Portland Iron Works, Portland
Portland Machinery Company, Portland
Prescott Iron Works, Inc., Portland
Prineville Machy. & Supply Co., Prineville, Ore.



WRITE FOR SAMPLE OF **E-Z GLIDE** SAW GUIDE STOCK

CHAMPION FRICTION BLOCKS
to fit ANY machine

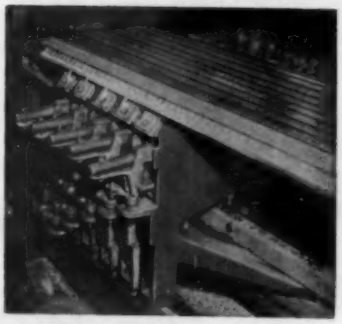
. . . Lasts Longer
. . . No Drum Scoring
. . . Smoother Power Application
. . . Greater Friction
. . . No Sticking or Chatter

CHAMPION FRICTION CO.
2375 7th Place West, P. O. Box 508, Eugene, Ore. Telephone: DI 3-8831, Emergency: DI 4-7591

PUSH BUTTON AUTOMATION

This Control Panel
and the C & D Setworks
Equals Edger and Resaw Automation

Edge and Resaw Faster, More accurately and reduce operator fatigue with the C & D edger and resaw setworks . . .



C & D
EDGER and RESAW
SETWORKS

Call or write for demonstration at YOUR MILL

manufactured by
C&D LUMBER CO.
MACHINERY DIVISION
Riddle, Oregon **Phone: TR 4-2281**
Dealer in Canada: Canadian Sumner Iron Works Ltd., 3550 E. Broadway, Vancouver 12, B.C.

Salem Equipment & Supply Co., Salem, Ore.
Schurman Macvh. Works, Inc., Woodland, Wn.
Soderhamn Machine Mfg. Co., Portland, Ore.
Star Machinery Co., Seattle, Wash.
Sumner Iron Works, Everett, Wash.
Tyee Machinery Co., Seattle, Wash.
M. A. Ward Construction Co., Eugene, Ore.
Western Machinery Corp., Portland
Western Steel & Supply Co., Dallas, Ore.
The Wheland Company, Chattanooga, Tenn.
Yates-American Machine Co., Beloit, Wis.; High Point, N. C.; Memphis; Portland
Zidell Machinery & Supply Co., Portland

SCRAGG MILLS
Keystone Machine Works, Roseburg, Ore.

SETWORKS-Automatic
C & D Machine Shop, Riddle, Ore.
Klamath Machine & Locomotive Works, Klamath Falls, Ore.
Mater Machine Works, Corvallis, Ore.
Mill Equipment, Inc., Seattle
Monarch Forge & Mach. Wks., Portland, Ore.
Sel-Set Machinery Corp., Salem, Ore.
M. A. Ward Const. Co., Inc., Eugene, Ore.

SHINGLE MILL MACHINERY
Sumner Iron Works, Everett, Wash.

SHREDDERS
Jeffrey Manufacturing Co., Columbus, Ohio

SPLITTERS, log
L-M Equipment Company, Portland, Ore.

SPEED REDUCERS
Dodge Manufacturing Corp., Mishawaka, Ind.
The Falk Corporation, Milwaukee, Wis.
Western Gear Corp., Lynwood, Calif.; San Francisco, Houston and Dallas, Texas; Seattle, Spokane, Portland

SPROCKETS and GEARS
Chain Belt Co., Seattle, Portland, San Francisco
Falk Corporation, Milwaukee, Portland
Link-Belt Co., Chicago, Seattle, Portland, San Francisco, Los Angeles, Spokane, Vanc., B. C.
Sheridan Gear & Mfg. Co., Portland, Ore.

STACKERS, UNSTACKERS, TRANSFERS
Lawson Stacker Co., Memphis, Tenn.
Lovsted & Co., Inc., C. M., Seattle, Wn.
Moore Dry Kiln, Portland; Jacksonville, Fla.
Stetson-Ross Machine Co., Inc., Seattle

STEEL, products, buildings, structural, industrial
Armco Drainage & Metal Products, Inc., Middletown, Ohio; Berkeley, Calif.; Seattle, Portland, Spokane, Atlanta, Denver, Houston, Guelph, Ontario

STEEL STRAPPING and STRAPPING TOOLS
Acme Steel Co., Chicago; Seattle; Portland; San Francisco; Atlanta; Spokane, Wash.
Gerrard Steel Strapping Division, U. S. Steel Corp., Chicago; Seattle; Portland; So. San Francisco; Birmingham, Ala.
Signode Steel Strapping Co., Chicago; Seattle; Spokane; Portland; San Francisco; Vanc., B.C.

TIRES
Firestone Tire & Rubber Co., Akron, Ohio
General Tire & Rubber Co., Akron, Ohio; Portland
B. F. Goodrich Co., Akron, Ohio; Portland; Seattle
Goodyear Tire & Rubber Co., Akron, Ohio; Portland; Seattle
U. S. Rubber Company, New York City; Portland; Seattle

TORQUE CONVERTERS
Schneider Div. of Westinghouse, Muncie, Ind.
Western Gear Works, Seattle

TRACTORS, Crawler
J. I. Case Mfg. Co., Racine, Wis.
Allis-Chalmers Co., Milwaukee, Wisc.
Caterpillar Tractor Co., Portland; Seattle; San Francisco; Peoria, Ill.
John Deere Co., Moline, Ill.
Euclid Div., General Motors Corp., Cleveland, Ohio
International Harvester Co., Chicago, Ill.
Oliver Corp., Chicago, Ill.

TRACTORS, Rubber Tired
Allis-Chalmers Co., Milwaukee, Wis.
J. I. Case Co., Racine, Wis.
Caterpillar Tractor Co., Portland; Seattle; San Francisco; Peoria, Ill.
John Deere Co., Moline, Ill.
Frank G. Hough Co., Libertyville, Ill.
R. G. LeTourneau, Inc., Longview, Texas
LeTourneau-Westinghouse Co., Peoria, Ill.

TRAILERS, log and lumber
Beall Pipe & Tank Co., Portland
Peerless Trailer & Truck Service, Portland, Ore.
Reliance Trailer & Truck Co., San Francisco

TRIMMERS
Albank Machine & Supply, Albany, Ore.
Irvington Machine Works, Portland, Ore.
Portland Iron Works, Portland, Ore.
Stetson-Ross Machine Co., Inc., Seattle
Klamath Iron Works, Klamath Falls, Ore.
Klamath Machine & Locomotive Works, Klamath Falls, Ore.
Sumner Iron Works, Everett, Wash.; Vanc., B.C.

VALVES, FLANGES
Zidell Machinery & Supply Co., Portland, Ore.

VALVES, Steam, air, hydraulic
Valvair Corp., Akron, Ohio
Western Machinery Corp., Portland

WAREHOUSING and FINANCING
Douglas-Guardian Whse. Corp.; New Orleans; Portland; San Francisco; Atlanta; Dallas.
Lawrence Warehouse Co., San Francisco

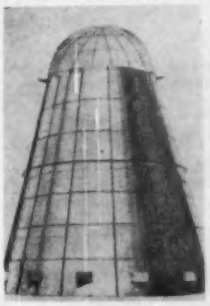
WATER COOLED GRATES
Western Foundry Co., Portland, Ore.

WINCHES
Hyster Company, Portland, Ore.
Pacific Car & Fndry. Co., Renton, Wn.; Chicago

WOOD PIPE
Federal Pipe & Tank Co., Seattle

WOOD PRESERVATIVES
Chapman Chem. Co., Memphis, Portland, Palo Alto
Dow Chemical Co., Midland, Mich.; Seattle
Monsanto Chemical Co., St. Louis, Seattle
Reichhold Chemical Co., White Plains, New York; Seattle; San Francisco; Port Moody
Wood Treating Chem. Co., St. Louis, Portland

WOODWORKING MACHINERY
Cascade Saw & Machine Co., Chehalis, Wash.
Greenlee Bros. & Co., Rockford, Ill.



SEATTLE REFUSE BURNERS

Prefabricated For Easy Erection

Send for Catalog No. 11

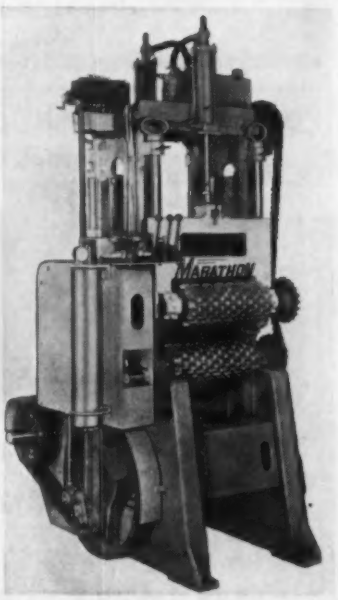
- BOILERS—NEW & USED
- TANKS, STACKS, CONVEYORS
- CUSTOM FABRICATION WORK

SEATTLE BOILER WORKS, INC.

Since 1889

5237 East Marginal Way • Seattle, Wash.
Phone Day—PArkway 2-0737
Night—GLencourt 4-5338

—MAKE MORE MONEY WITH MARATHON—



#240 Marathon with 13"x20" Cant GANG handles cants as short as 3 feet.

MARATHON GANG USERS

OREGON
Alicel Lbr. Co.----------Alicel
Beerli Lbr. Co.----------Glendale
**Little Nestucca ---Grand Ronde
Iron Mt. Lbr. Co.--------Chemult
LaCreole Lbr. Co.---------Dallas
M & Y Lbr. Sales---------Selma
Siskiyou Lbr. Co.--------Ashland
Oregon Sawmill ---------Ashland
Crest Lbr. Co.----------Sheridan
Red Fir Lbr. Co.-------Philomath
Stanwood Lbr. Co.---------Drain
Stout Creek Lbr. Co.------Mehema
Wm. A. Peacock----------Elgin
Wisby Bros. ----------Four Mile
**Harris Pine Co.------Pendleton
Stiller Bros. ----------Yamhill

CALIFORNIA
Daniels & Rose----------Elk
Idaco Lbr. Co.--------Healdsberg
May & Foote----------Montague
Padula Lbr. Co.----------Willits
Alpine Lbr. Co.-----N. Sacramento
Otto Voght Lbr. Sales
Chinese Camp
**Santa Cruz Veneer--Santa Cruz
Berry & Smith-------Dutch Flat

MONTANA
Corcoran Pulpwood Co.--Bozeman
Evergreen Timber Co.---Kalispell
Taber Mill ----------Hamilton
B & K Lbr. Co.----White Sulphur
*Double A Lbr. Co.----Livingston

ARIZONA
Whiting Bros. --------St. Johns
*A. Louis Peterson------Prescott

WYOMING
Beaver Creek Timber------Daniel
S. H. Grisham & Sons---Greybull
Ray Willey ----------Newcastle
*Merle Johnson ---------Hulett

COLORADO
Willy Lbr. Co.----------Gould
Flogaus Lbr. Co.-----Woody Creek
*West Slope Lbr.---------Eagle
Flemming Lbr. Co.-------Minturn

ALASKA
Kenai Lbr. Co.----------Seward

PHILIPPINE ISLANDS
Findlay Millar ----------Manila
Harold R. Jones---------Butuan

WASHINGTON
Buse Lbr. Co.----------Everett
Carroll Mill Co.----Sedro Woolley
Emerson Lbr. Co.---------Wilbur
Jackson Lbr. Co.----Port Angeles
McDonald Lbr. Co.----------Usk
J. K. McInnis--------Gig Harbor
L. R. Smith Hardwood---Longview
**Smith-Nielsen Mfg. Co.
Kettle Falls
Art Stayten ----------Stanwood
Lurcher Lbr. ---------Hood Canal
**McDonald Mill -------Bingen
Oroville Pole Co.---------Oroville
Scott Lbr. Co.----------Dayton
Ajax Lbr. ----------Longview

IDAHO
**Price Valley Lbr.----Tamarack
**Priest River Lbr.---Priest River
Rauch Lbr. Co.----------Troy
*Skow Lbr. Co.---------Lewiston
Turner Lbr. Co.-------Priest Lake
Art Uma ----------Orofino
**Brown's Tie & Lbr.-----McCall
Plummer Pole Co.-------Plummer

UTAH
Coleman Bros. ----------Vernal

PENNSYLVANIA
Carl Eberts ----------Tamaqua
Woodland Products --Downington

NORTH CAROLINA
**Casey Lbr. Co.-----Rocky Point

LOUISIANA
*Carroll Maxwell Lbr.----Pollock

ALABAMA
Bennett Lbr. Co.------Greenville
Gulf Lbr. Co.----------Mobile

GEORGIA
**Balfour Lbr. Co.---Thomasville
Souter Lbr. Co.-------Montezuma
**Fraser Lbr. Co.-------McIntosh
**C. B. Lamb Lbr.-------Midville
F. L. Mobley----------Sylvania
**Satilla Lbr. Co.-------Nahunta
*Newman Lbr. Co.------La Grange
*J. D. Hallman Lbr.-----Eatonton
**Penninsula Lbr. -------Claxton
Seymour Bros. Lbr. Co.--Eatonton
*J. P. Haynes Lbr. Co.----Canton
*Seymour Bros. Lbr. Co.-Eatonton

FLORIDA
W. L. Sherrod--------Greenville

**28" Gangs *20" #240 Gangs

There Must Be a Reason — Write for Details

Marathon Builds Gangs in 4 Sizes for Cants, Logs and Cores
13" x 20" 20" x 20" 15" x 28" 28" x 28"

Efficient assembly line production makes Marathon the largest manufacturer of gang mills in North America, with resultant LOWEST COST.

THE PORTLAND MACHINERY COMPANY

208 S. W. FIRST AVENUE ***"Serving Northwest Industry Since 1900"*** **PORTLAND 4, OREGON**

ANDERSON BLOWPIPE & MFG. CO.

BLOWER SYSTEMS FANS DUST CONTROL
INCINERATORS SPECIALTY ITEMS

5960 4th Ave. S.
Seattle 8, Wash.
PArkway 2-4844

1213 Mitchell Rd.
Vancouver, B. C.
ELliot 4422

POWER PLANT EQUIPMENT

Turbines • Boilers • Diesels—Any Size

Write for Prices Giving Your Requirements

CHARLES WEAVER CO., INC.

19701 James Couzens Highway • BR 3-1900 • Detroit 35, Mich.

IN STOCK

GANGS

1 **MARATHON** Model 120—20"x20"
1 **PREMIER** 25"x20"
1 **WICKES** 8"x32"
1 **SUNBO**
1 **SUNBO** 30"x20"

HORIZONTAL RESAW

1 **YATES** No. H6—72" Roller Bearing, Divided Bed

EDGER SPECIAL

1 **SUMNER** 10x60—6 saw stub lever power set—double feed rolls—ball bearing chrome plated arbor

INSERTED TOOTH SAWS

48 Circular Head Saws 40" to 64" diameter—all patterns and gauges
40 Circular Edger Saws 14" to 36" diameter

CLYDE P. CARROLL MACHINERY CO.

MACHINERY — ELECTRICAL EQUIPMENT — MILL SUPPLIES
LIQUIDATIONS — APPRAISALS

OFFICE CAPITOL 2-1013 • WAREHOUSE PROSPECT 1-8881

122 S. W. FIRST AVENUE PORTLAND 4, OREGON

There is a job-tested and proven

BAIER steel work boat

for your every need.

Guaranteed performance based on 43 years of boat building know-how insures lower operating cost.
Your choice of dozer, pond and rafting boats.
Gasoline or diesel power.

In 12' - 16' - 20' - 24' and 28' lengths.

(Stock 16-footers for immediate delivery.)

TOW BOATS

All diesel powered. Single or twin screw.

From 32 to 90 feet. For rivers, bays or sea. Deep or shallow draft.

*We deliver on schedule. Ask our customers.**
They are our best advertisement.

* Names on request.

SCOUGAL RUBBER MANUFACTURING CO

WE CAN MANUFACTURE ANYTHING OF RUBBER

2731 First Ave. So. Seattle, Wash.

SPECIAL

Model HF 30 Automatic 3000# Battery-operated. Fork Lifts Explosion Proof. Late Machines New Condition.

With Battery & Chargers. 90 day guarantee. Bargain 1/3 replacement cost. 4000# pallet decks. Explosion Proof Battery & Charger—$750.00 each.

GADD ENTERPRISES

CA 2-1222 — CA 3-9409
3345 N. W. Front, Portland 10, Oregon

Industrial Supply Co.

KALISPELL, MONTANA

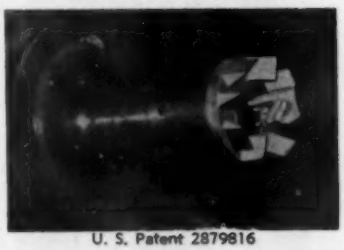
MONTANA'S LARGEST INDUSTRIAL SUPPLIER NATIONALLY KNOWN LINES

BAND & CIRCULAR SAWS & SAW BITS
GANGSAWS AND BANDMILLS
BALL AND ROLLER BEARINGS
PLANERS, KNIVES AND CUTTER HEADS
GRAVITY ROLLS
SAW GRINDING EQUIPMENT AND GRINDING WHEELS
ELECTRIC MOTORS AND CONTROLS
V BELTS, FLAT BELTS AND LACING
AIR & HYDRAULIC VALVES & CYLINDERS
COMPLETE SAWMILL EQUIPMENT
KNIFE & SIDE HEAD GRINDERS
STEEL & CAST IRON SAWMILL CHAIN
ROLLER CHAIN AND SPROCKETS
POWER & TRANSMISSION MACHINERY
EDGERS AND TRIMMERS
WINCHES AND HOISTS
BARKERS
CHIPPERS

175 N.E. Railroad St.
KALISPELL, MONTANA
P. O. Box 473
Phone SKyline 6-5900

QUICK CHANGE CHUCK

For Veneer Lathes



U. S. Patent 2879816

Adapter hub stays on the spindle. Lightweight plates are easy to change. Installed on your lathe on free trial basis.

See for yourself why major plywood plants use Humboldt Quick Change Chucks.

Call Collect for free 30 day trial installation.

HUMBOLDT Machine Works

937 - 10th st. Arcata, Calif.
Phone: VAndyke 2-2928

FOR SALE

Yates-Am A-62 15" P & M B D 8 K Prof
Yates-Am A-66 15" P & M Dir Elec 8 K
Yates-Am A-20 15" P & M B D 6 K Prof
Yates-Am A-20 20" P & M Dir Elec 6 K
Woods #412 15" P & M B D 8 K Prof
Woods 412 M 15" P & M Dir Elec 6 K

R. K. HASKEW & CO., INC.
Phone Amherst 6-6214 Box 4065
Chattanooga 5, Tennessee

Want sales outlet for short length Fir, Hemlock, and Cottonwood lumber.

Write BEAVER LUMBER COMPANY
P. O. Box 3307, Eugene, Oregon

FOR SALE

Mattison Model 226, 12", 4 head, Electric Moulder, 15 Hp top and bottom, 7½ Hp both sides, 5 Hp feed. GOOD CONDITION

U.S. "Vari-Drive": 25-35 Hp, 3 to 1 speed range. IDEAL PLANER FEED DRIVE—electric remote control

McCOY MACHINERY
745 So. Lincoln St., Stockton 3, California

USED MACHINERY VALUES

6' Diamond r.b. band mill, R.H. or L.H.
65 Sumner r.b. hog, rebuilt
45 Sumner r.b. hog, rebuilt
4 Moore cross circulating dry kilns, 103'
30" x 20" Mill Engineering gang saw
12" x 32" Wickes gang saw
84" Sumner r.b. motorized resaw
48" Turner r.b. band resaw, late type
12" x 60" I. W. Johnson 6-saw edger, late type
16" x 30" Stetson-Ross # 4 timber sizer
890 Diehl tapeless splicer
15" Stetson-Ross 6-12A1 elec. high speed planer, dbl. pro.
15" Stetson-Ross 6-10A1 elec. planer, d.p.
15" Stetson-Ross 17-A1 10-k. elec. planer, d.p.
15" x 8" Woods 412M 8-k. elec. planer, d.p.
6" # 272 Mattison electric moulder
10" #134 BM Woods 5-head electric moulder
24' Stetson-Ross T-30 10-saw trimmer
#435 H Mereen-Johnson 16' equalizer, 14-saw
Diehl # 750 straight line rip saw
Hermance # 300-G gang rip saw

TYEE MACHINERY COMPANY
1924 First Avenue South Seattle 4, Washington MUtual 2-5888

Equipment for Sale

1. 20' Diameter Circular Veneer Off-Bearing Table, Knocked Down to 4 Quadrants, Table Shaft, Bearings and Sprockets, 2 H.P. Master Gearmotor 48 R.P.M. with Sprocket, Switch, and Starter . . .
Plus Feed Tray for Above Table, Assembled with Legs to Match Circular Table, Head and Tail Shaft 21'—4" Centers, Overall Width 8'-0", 5—4" Belts @ 20" Centers, 3 H.P. Master Gearmotor 32 R.P.M. with Sprocket, Switch, and Starter.
. . . . $2,500.00 f. o. b. Port Angeles, Wn.

2. New, Unused, Sumner 66" Vertical Cut Veneer Chipper for ⅝" Chips, Overhead Discharge, Complete with Feedworks, Gear Motor for the Feedworks Drive, Feed Table and Vee-Belt Drive Sheave for the Arbor.
. . . $10,000.00 f. o. b. Port Angeles, Wn.

Peninsula Plywood Corporation
Port Angeles, Washington

Schurman SELECTIVE WHEEL TRIMMER

SQUARE, BOX-TYPE BEAMS FOR GREATER RIGIDITY

Schurman Standard Series Selective Wheel Trimmer, 20 feet, 11 saws.

We manufacture a rugged HEAVY SERIES Trimmer for sawmills and a STANDARD SERIES Trimmer for planing mills or small sawmills. Available in Automatic Random Length Wheel Trimmers, Selective Wheel Trimmers or Selective Air Trimmers to fit any size mill.

WRITE OR CALL TODAY

RECENT SCHURMAN TRIMMER DELIVERIES

Lucas Planing & Dry Kiln Co., Ogden, Utah
Cabox Mills, Grants Pass, Ore. (2 Trimmers)
Holding Lumber Co., Adams Lake, B. C.
San Poil Lumber Co., Republic, Washington

SCHURMAN MACHINE WORKS, INC.
WOODLAND, WASHINGTON • PHONE CApitol 5-2671

Planning Construction?

CALL· BUtler 5-2517 OR WRITE

FABRICATED STEEL

CUSTOM MANUFACTURERS OF

COMPONENT PARTS for

✔ Log Hauls ✔ Conveyors ✔ Side Lifts
✔ Skid Decks ✔ Machinery Bases
✔ Structural Steel Buildings

LEWIS-RIFFEL, Inc.

P. O. BOX 4257
PORTLAND 8, ORE.
ESTIMATES GLADLY

STEEL FABRICATION AND ERECTION · LEWIS-RIFFEL, INC. ·

Business Opportunity

• LUMBER MILL WANTED •

As Associate to dynamic executive with full knowledge of the PRE-FAB WOOD ROOF TRUSS Industry. This newest construction product now accepted by largest builders of Tract Homes, Apt. Houses and low Commercial Structures as new concept in construction, with speed and cost-saving factors. Potential production estimated at 25,000,000 b.f. annually. Fir—Hemlock—2x4—2x6. Plant location Los Angeles area, with possible additional plant San Francisco Bay area, San Diego. Financially sound organization with substantial investment in plants can have potential outlet for its forest products. Advertiser is sound executive with many years of Administration. Financial, Sales Promotion, Distribution and Construction experience.

Address TL Box 443, c/o THE LUMBERMAN
731 S. W. Oak Street, Portland 5, Oregon

WANTED

Unique products related to lumber, wood, and pulp processing industries. Patentable items only for exclusive manufacturing and marketing rights.

Superior ORE'CO
P.O. Box 807 Bend, Oregon

CRANE FOR SALE $7500.00

L 40 Lorain ¾ yd. Crawler Crane with D4600 caterpillar diesel engine. Constantly maintained; excellent condition. Cost about $25,000.00 new. Can be seen in Healdsburg, Calif. Call Windsor, Calif. Vernon 8-2556 or if you would like to trade lumber for it, call collect the Eastern wholesaler owner Philadelphia, Penna. Chestnut Hill 8-0600.

Write TL Box 439, c/o THE LUMBERMAN, 731 S. W. Oak Street, Portland 5, Oregon

Another ALBANY TRIMMER . . .

This Overhead Chain Driven Heavy Duty Trimmer

the second in a year

Was Recently Delivered To

MOSER LBR. CO.
KINGS VALLEY, ORE.

- ALL STEEL CONSTRUCTION FOR DURABILITY
- ANTI-FRICTION BEARINGS THROUGHOUT

WE BUILD ALBANY BAND MILLS, TRIMMERS, EDGERS, CARRIAGES and TRANSMISSION LINEBARS

ALBANY CHAIN DRIVEN AIR LIFT TRIMMER

WRITE FOR COMPLETE DETAILS . . . LITERATURE

Tell us your manufacturing problems. We have the equipment for real production.

ALBANY THE BEST FOR LESS

MACHINE AND SUPPLY COMPANY
Albany, Oregon

Re'ne Fritz, Mgr. WAbash 8-9441
Write, Wire or Phone for Complete Details

SAWYER WANTED:

Top priced man wanted to take over sawing job in medium size circular mill, sawing mostly hardwood. Riderless carriage, hydraulic feed and nigger. Gang saw for lowgrade. Don't answer unless you can "read" the log, get the grade and highest yield from the log in the shortest length of time. We expect to pay high for the right man, but he has to prove.

Write TL Box 440, c/o THE LUMBERMAN, 731 S. W. Oak Street, Portland 5, Oregon

USED PLANING MILL MACHINERY

HARRY G. BLAKE
P.O. Box 327 Gearhart, Oregon
Phone—REdfield 8-5444

AVAILABLE

Manager-engineer, licensed, graduate mechanical. Thoroughly experienced lumber, plywood, hardboard in production, engineering, construction. Prefer Portland, Oregon, area.

Write TL Box 442, c/o THE LUMBERMAN, 731 S. W. Oak Street, Portland 5, Oregon

405 HP RILEY STEAM PLANT

Good as new. 270 lbs. W.P. Available now.
ME 2-0124, CH 2-2902, SU 4-3264
Seattle, Washington

WANTED

Top plywood manager for co-op. State qualifications and references.

Address reply to President, P. O. Box 337, Crescent City, California.

FOR SALE—One used plywood panel sizing unit $9,500.00.

Write or call
CASCADE SAW & MACHINERY CO.
Chehalis, Washington

FOR SALE

One 8-ft. Torwegge Veneer Edge-gluer, 800-W heater bars, type H-52, complete with motors and controls.

Write P. O. Box 605, Arcata, California.

YATES 49" 8-DRUM SANDER

Direct motor driven each drum. Complete with switches, starters, blower system.
BLACK BROS. PRESS 50"x100", 60" opening, all electric, new condition.

BURKE MILLWORK COMPANY
P. O. Box 1930
Seattle 11, Washington
MElrose 2-0124 CHerry 2-2902

FOR SALE

Used Machinery & Equipment

2—Hurricane Pole Peelers with motors
2—D-3 Barkers, 3-ball section, with side kick-out, for 10' to 20' logs, with scraper or chain heads, with motors
1—Reconditioned D-3 Barker, with motors
2—24' Jackson Barkers, with motors
1—48" Hansel Chipper, less motors
1—2-Knife Force-Feed Horizontal Ari Chipper, with feedwork gearmotor, less disc motor
1—24' Fulghum Barker, with motors
1—30" Nicholson Barker, with motors

SODERHAMN MACHINE MANUFACTURING CO.
Talladega, Alabama EMerson 2-9081

FOR SALE MACHINERY

A lumberman from the Pacific Northwest decided to fly to Las Vegas to have some fun and take a fling at gambling. After playing cautiously for a while he made up his mind to risk all his savings on one spin of the wheel. Seconds later he had lost his money. There were some groans and a hush fell over the crowd gathered around the table. The lumberman, the calmest one there, looked about him and then said cheerfully. "Well, easy come, easy go. There's more where that came from . . . the lumbering business is a cinch!"

1 P & H ¾ yd. Long Track Shovel with Goose-Neck Boom & Young 2 Point Grapple, New G.M.C. 4 Cyl. Diesel—All A-1 Condition.
1 D 7 Cat Tractor with Hyster Drum & Straight Cat Blade.
1 D 6 Cat Tractor with Integral Arch with Hyster Drum & Cat Blade.
1 Rubber Tired CARCO Logging Arch.
1 Garrett Rubber Tired Arch.
1 H.D. 10 A.C. Tractor with Hyd. Dozer & Single Drum Winch.
1 Hyster D L 7 Triple Drum.
1 Ford 16-Passenger Crew Bus, new rubber, low priced.
1 D.D.H. 20 Schurman Double Drum mounted on Ford Truck, complete with guylines & rigging—All A-1 shape.
1 D.D.H. Schurman Double Drum on steel skids.
1 22 Pass Ford Crew Bus—excellent shape.
1 75 H.P. 13,000 Cat 6 Cyl. Diesel Power Unit—low priced $750
1 75 H.P. 6 cyl. Continental Gas Power Unit with Clutch.
1 Wagner Mobile Scoop 5,000 lb. Cap., Front wheel drive, Hyd. steering.
1 O. C. 3 Oliver Tractor with Blade & Drum.
1 O. C. 4 Oliver Tractor with Blade & Drum.

See our Colyn Snyder "The Man of the Hour" for particulars on the logging equipment—to buy, sell or trade.

Pumps of all kinds, for every purpose. See us for Gearhead Motors.

3 PHASE U. S. GEARHEAD MOTORS:

1	7½	H.P.	30 R.P.M.	1	3	H.P.	155 R.P.M.
1	5	H.P.	45 R.P.M.	1	3	H.P.	230 R.P.M.
1	3	H.P.	30 R.P.M.	1	2	H.P.	84 R.P.M.
1	3	H.P.	37 R.P.M.	1	2	H.P.	155 R.P.M.
1	3	H.P.	100 R.P.M.	1	1½	H.P.	68 R.P.M.

GRAYS HARBOR EQUIPMENT CO., INC.

"Pump Man Bob Isaacson"

401 South F Street Phone LE 2-8643 Aberdeen, Washington

Medium size lumber company wants to buy mill with timber, or large tracts of private timber without mill in Idaho, Montana or Colorado.

Write TL Box 433, c/o THE LUMBERMAN, 731 S. W. Oak Street, Portland 5, Oregon.

Enthusiastic lumberman. Under 30. Desires new, challenging position. Title not important, remuneration is. Experience includes millwork and lumber production, mill sales, and wholesaling.

Write TL Box 432, c/o THE LUMBERMAN, 731 S. W. Oak Street, Portland 5, Oregon.

Plywood and Lumber Executive—just recently resigned as assistant sales manager, eastern office of large plywood and lumber manufacturer, seeks to represent top quality mill in the East. 41. Excellent health.

Write TL Box 441, c/o THE LUMBERMAN, 731 S. W. Oak Street, Portland 5, Oregon.

FINANCING AVAILABLE
TO RESPONSIBLE PLYWOOD AND LUMBER MILL

Write TL Box 438, c/o THE LUMBERMAN, 731 S. W. Oak Street, Portland 5, Oregon.

Small sawmill with operator wanted. Ideal site with dry kiln, pond, paved storage areas, dry sheds, machine shop, railroad spur. Timber available. Puget Sound area.

Write TL Box 437, c/o THE LUMBERMAN, 731 S. W. Oak Street, Portland 5, Oregon.

Complete sawmill to be moved. Sidelift, live deck, 48" 3-block carriage, 9' filer Stowel band, with 250 HP motor, 7-saw 8"x48" edger, with 150 HP motor, 11-saw 20' selective trimmer, all electric.

Post Office Box 427, Arcata, California.
Phone Vandyke 2-0335.

WILLIAM HULBERT MILL COMPANY

P. O. Box 1111 1200 Norton Avenue Everett, Washington ALpine 2-5186

USED EQUIPMENT FOR SALE

1 360' 1¾x10" Esco Log Haul Chain and 30 4-point chairs and 5-Tooth drive sprocket

1 Compressor, LeRoi 315D, 2-stage radial, 24"x36" receiver, with 50 h.p. 660 rpm, 440 V. motor

1 Nigger, 10x12x72 oscillating steam, Sumner, 6½" Esco bar

1 Carriage, 3-Block, 72" opening, Sumner, Trout set-works, off-set

1 Twin Feed, 10"x12" Sumner with 44" 15-groove drum

1 Edger, Allis Chalmers 10"x60", 6-saw with direct connected 200 h.p. 1200 rpm 440 V. motor

1 Log turner, 3-arm 5-15/16" shaft with 12x24" steam cylinder

1 Tower edger, 42"x4", one-saw, handset

1 Lath stripper, Sumner 5-saw, steel frame, including 40 h.p. direct drive

1 Lath bolter, Wicks type A, 3-saw

1 MG set, G. E. 25 KW, 200 AMP, 125 V with 35 h.p. motor

1 MG set, Allis-Chalmers 15 KW, 65 AMP, 220 V with 20 h.p. motor

1 Steam turbine, GE, 1000 KW AC generator, 150# pressure

1 DC generator, GE, 25 KW

4 Band head saws, 60 foot, 11 gauge, 16", like new

4 Band resaws, 31 foot, 16 gauge, 10"

1 Hog, Sumner 35, roller bearing, steel base with 60 h.p. motor, excellent condition

1 Motor, saw-arbor, 7½ h.p., 3600 rpm, 200/440, new

1 Trim saw, Yates 60", ball bearing arbor, 3 h.p. motor, excellent condition

2 Trim saws, Sumner 40", 4.2 h.p. motors

1 Reduction Unit, 5 h.p., Sumner double geared 40:1

1 Reduction motor, 3 h.p., 1740/125 rpm, Fairbanks-Morse, Falk reducer.

THE LUMBERMAN'S Advertising Index

A

Acme Steel Co.----14
Albany Machine & Supply Co.----104
Alemite Div. of Stewart-Warner Corp.----19
Allied NW Machine Tool Corp.----94
Allis-Chalmers----34
American Cyanamid Co.----57
American Sawmill Machinery Co.--83
American Sheet Metal Works, Inc.-91
Anderson Blowpipe & Mfg. Co.---102
Archer Blower & Pipe Co., Inc.----97
Armco Drainage & Metal Products-86
Autocar Div. of White Motor Co.---62

B

Baier & Assoc., L. S.----102
Balden Co., F. E.----98
Bartlett Electric Co.----94
Berry Hydraulics----85
Bobbs Air-Draulics, Inc., Ray----95
Brook Motor Corp.----82

C

C & D Lumber Co.----100
California Blowpipe & Steel Co., Inc.----98
Canadian Car (Pacific) Ltd.----80
Carroll Machinery Co., Clyde P.--102
Cascades Plywood Corp.----106
Caterpillar Tractor Co., Engine Div. 20
Champion Friction Co.----100
Chapman Chemical Co.----29
Chevrolet Div. of General Motors--13
Clark Equipment Co., Industrial Truck Div.----17
Clayton Mfg. Co.----74
Coe Mfg. Co.----22
Columbia Rubber Mills----94
Corinth Machinery Co.----83
Corley Mfg. Co.----77

D

Denver Fire Clay Co.----75
Diamond National----49
Dodge Mfg. Corp.----32-33

E

Ederer Engineering Co.----15
Ekstrom, Carlson & Co.----87
Esse Radio Co.----80

F

Falk Corp., The----2
Federal Pipe & Tank Co.----94
Friden, Inc.----78

G

Gadd Enterprises----102
General Motors----13
Globe Machine Mfg. Co.----106
Goldstein & Bloch----106
Goodyear Industrial Prod. Div.----7
Goodyear Rubber & Supply Co.----97
Grays Harbor Equip. Co., Inc.----105
Greenlee Bros. & Co.----30
Guertin & Assoc., Ltd., R.----98

H

Haskew & Co., Inc., R. K.----103
Heil Co., The----75
Heppenstall Co.----76
Hulbert Mill Co., Wm.----105
Humboldt Machine Works----102
Hyster Company, Industrial Truck Div.----28
Hyster Sales Co.----94

I

Industrial Development Co.----98
Industrial Supply Co.----102
Irvington Machine Works----55

J

Jeddeloh Bros.----52

K

Keystone Machine Works----94
Klamath Iron Works----97
Klamath Mach. & Loco. Wks., Inc.-74
Klamath Machinery Co.----77

L

Lamb-Grays Harbor Co., Inc.----77
Lawson Stacker Co., Inc.----77
Lewis-Riffel, Inc.----104
Link-Belt Co.----Cov. 2
Lodge & Shipley Co.----10
Lovsted Inc., C. M.----90
Luster Engineering & Machine Works----94

M

McCoy Machinery----103
McDonough Mfg. Co.----93
Mater----90
Mater Engineering----98
Max Mfg. Co.----99
Mill Equipment, Inc.----96
Moline Malleable Iron Co.----18
Monarch Forge & Machine Works, Inc.----98
Moore Dry Kiln Co.----83

N

National Machinery Sales, Inc.----52
Nelson Electric Mfg. Co.----82
Nelson Log Bronc Co.----94
Newman Machine Co., Inc.----22
Northeast Ohio Machine Builders, Inc.----79
Northwest Chain & Sprockets, Inc.-95
Northwest Engineering Co.----3

P

Peninsula Plywood Corp.----103
Pettibone Mulliken Corp.----54
Phelps Bros.----95
Portland Chain Mfg. Co.----73
Portland Iron Works, Inc.----60
Portland Machinery Co.----101
Prineville Machine & Supply Co.---56

R

Rader Pneumatics, Inc.----22
Rambo, W. H.----99
Raybestos-Manhattan, Inc., Manhattan Rubber Div.----51
Reichhold Chemicals, Inc.----53
Rockwell-Standard Corp., Transmission & Axle Div.-Det.---25

S

Salem Equipment & Supply Co.---59
Schurman Machine Works, Inc.---103
Scougal Rubber Mfg. Co.----102
Seattle Boiler Works, Inc.----101
Sel-Set Machinery Corp.----89
Siempelkampf & Co., G.----61
Signode Steel Strapping Co.----26
Simonds Saw & Steel Co.----5
Simonds Abrasive Co. Div.---Cov. 3
Smythe Co., Ray----94
Soderhamn Machine Mfg. Co.--9, 105
Soule' Steel Co.----Cov. 4
Spear & Jackson----80
Square D Co.----24
Standard Dry Kiln Co.----50
Standard Oil Co. of California----1
Stetson-Ross Machine Co., Inc.-48, 80
Stewart-Warner Corp.----19

T

Thompson & Homberg, Inc.----98
Timberman's Engineering Co.----98
Towmotor Corp., Gerlinger Div.----11
Tyee Machinery Co.----103

U

Union Oil Co. of California----23

V

Valvair----59
Vanderbilt Co., R. T.----83

W

Ward Construction Co., Inc., M. A.-98
Weaver Co., Inc., Chas.----102
West Coast Plywood Co.----79
Western Gear Ind. Prod. Div.----31
Western Machinery Corp.----95
Wheland Co., The----84
White Motor Co., Autocar Div.----62
Whitmore Mfg. Co.----27
Wilson Dry Kiln Co.----97
Wood Co., R. D.----6
Wood Treating Chemicals Co.----81
Woods Machine Co., S. A.----58

Z

Zidell Machinery & Supply Co.----95

While every precaution is taken to insure accuracy, we cannot guarantee against the possibility of an occasional change or omission in this index.

GOOD **MACHINERY** BUYS

SAWMILL MACHINERY

24' wheel trimmer B.B. on steel beam
70' steel log haul conveyor
2 log kickers, 10"x22" air cylinder
Simonson Turner—2—12"x96" cylinders
2 log kickers, 14x36 cylinders F & S
Log Stop—4 15/16" shaft, 14"x20" cyl.
Log Stop—4 7/16" shaft, 14"x20" cyl.
Log Gang 36"x20" stroke, "Record"
Log Gang 26"x20" stroke, "Record"
Edger 10x60 Phoenix, ball bearing
14"x18" steam feed engine geared

MOTORS

HP	Speed—Volts
1—500	3600—2300 CW
1—500	3600—2300 Ind. WH
1—450	3600—2300 WH
1—400	300—2300 Syn. GE
1—200	1200— 440 Ind. GE
1—200	1200—2300 Syn. GE
1—200	900—2300 Syn. GE
1—200	514—2300 Ind. GE
1—200	500—2300 Sr. GE 3 Br.
1—125	1200— 440 Ind. WH
3—100	900— 440 Ind. WH
2— 75	900—2300 Ind. WH
1— 75	720— 440 Ind. GE
1— 75	514— 440 Sr. GE
1— 40	1800 440 Ind. GE

ROLL CASES

Steel frames, Roller chain driven
6—10x24x2 7/16"—1½" P
5—10x30x2 7/16"—1½" P
6—10x30x2 7/16"—1½" P
7—10x60x2 7/16"—1½" P
15—6x20x1 15/16—1¼" P
10—6x20x2 3/16—¼" P Concave

MISC.

Chipper, 72"—10 knife Carthage with 400 HP, 300 RPM 2300 V. Synch. Motor
Band Rip Saw, Yates R4—54"
Worthington Twin Horiz. 2 stage, 393 cu. ft. Air compressor
IR 315 CFD air compressor, 75 HP motor 440 V w/V belt drive 368CF
IR 12x10 ER1 Air Compressor
#94 Berlin 6 knife planer 6x9
#404B Woods 6 knife planer 6x18
#207 Madison rip saw straight line
Master S & W dragsaw, 20 HP motor
Lincoln 300 Amp gas driven welder
Ray Burner 400 HP turbine driven
Irvington Trim Saw #26, 3 HP Mtr., ¾ HP swing motor
#150L Covel grinder w/72" clamp
#18 Armstrong Grinder
5 electric panels, magnetic starters and disconnect switches 440 V
Lathe, Lodge & Shipley 20" Swing 12' centers
66" left hand Mershon Resaw
72" Resaw top and bottom wheels

LOGGING SUPPLIES

GOLDSTEIN & BLOCH

SAW MILL MACHINERY

Phone LEnox 2-1234 P.O. Box 33 Aberdeen, Wash.

FOR SALE

1 Late Model Lawrence
Glue Spreader 53"
Rubber Rolls

GLOBE MACHINE MFG. CO.
701 East D Tacoma, Wn.
Phone FUlton 3-2584

FOR SALE

Complete Diesel Power Generating Equipment in A-1 Condition, where is, consisting of:

Two (2) 12-567 General Motors 900 HP, 740 RPM Diesels, each coupled to a 750 KVA Generator, 2300 volt, with Switch Panel, Starting Batteries and all auxiliary equipment for ready use. Call or write,

Cascades Plywood Corporation
Lebanon, Oregon
Mr. H. G. Whiting

BETTER than ever for keeping
saw teeth sharp and uniform

SIMONDS SAW GUMMING WHEELS

with SA Borolon®

Accurate tooth shapes, clean contours, good finish! That's what you can count on with these wheels. They're made with free-cutting, more friable SA Borolon, the single crystal-type aluminum oxide abrasive with greater stress-free cutting edges in every particle. That is why Simonds SA Borolon vitrified bonded Saw Gumming Wheels are consistently preferred for fast, cool grinding deep down in the gullets without burns, cracks or check marks . . . and why it makes good sense to use them on your band and circular saws. Send for catalog bulletin and order from your Simonds distributor.

SIMONDS ABRASIVE CO.

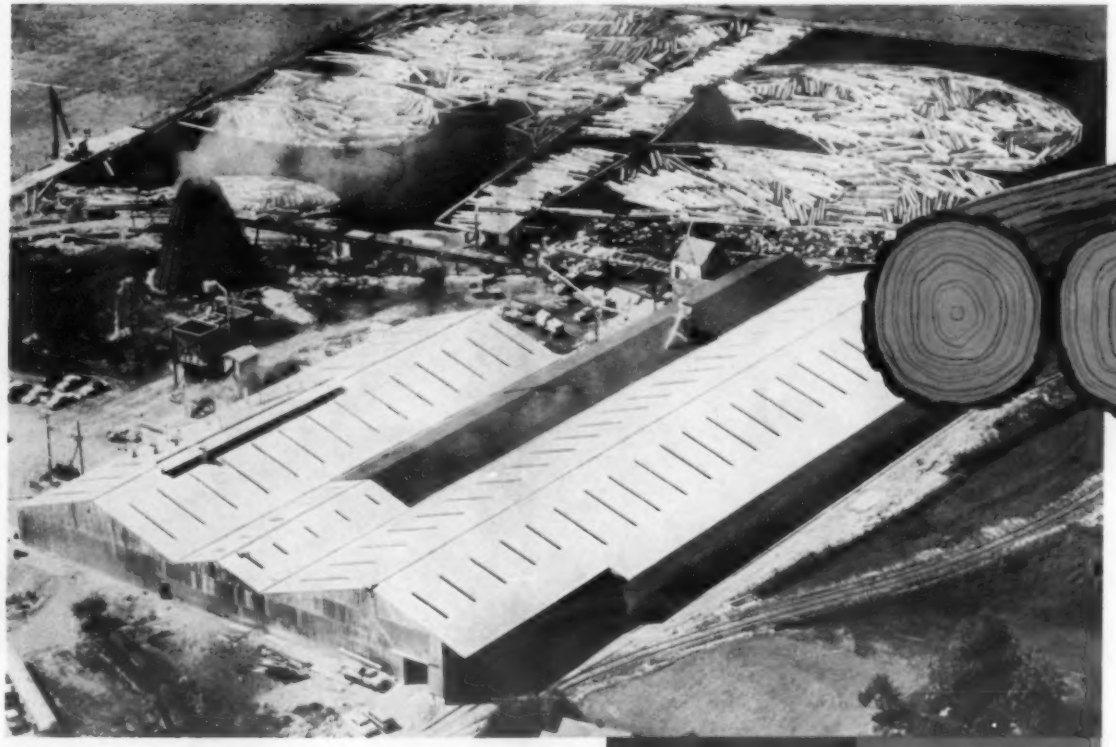
Tacony & Fraley Sts.
PHILADELPHIA 37, PENNA.
Division of Simonds Saw and Steel Co.

COUNT ON / YOUR SIMONDS DISTRIBUTOR / FAST SERVICE • LOCAL STOCKS

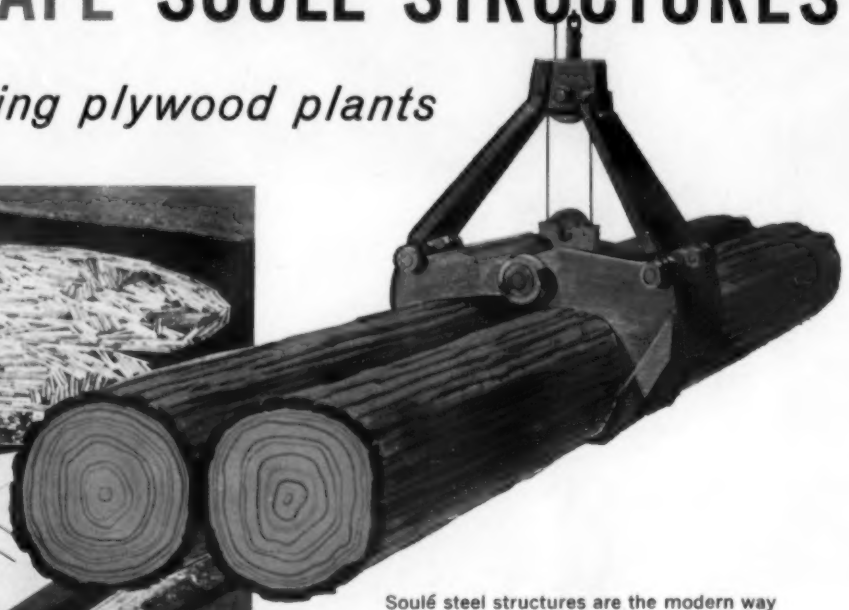
WEST COAST PLANT: EL MONTE, CALIF.—BRANCHES: CHICAGO • DETROIT • LOS ANGELES • PHILADELPHIA • PORTLAND, ORE. • SAN FRANCISCO
SHREVEPORT—IN CANADA: GRINDING WHEELS DIVISION, SIMONDS CANADA SAW CO., LTD., BROCKVILLE, ONTARIO • ABRASIVE PLANT, ARVIDA, QUEBEC

MODERN, ROOMY, FIRE-SAFE SOULE' STRUCTURES

for new or expanding plywood plants



5406



Soulé steel structures are the modern way to achieve profitable plywood plants. You specify exact width, length, ridge height—and Soulé customizes your plant with mass production economies. You get vast clear area for efficient layout of manufacturing operations; and, because they are all-steel, Soulé structures help you save dollars on fire insurance.

Photo shows Inply Corporation's modern new Independence, Oregon plywood plant. Original operation was housed under the shaded roof area. Soulé structures gave Inply more useable floor area, dry, rugged, safe corrugated steel roof and side walls, and minimum maintenance.

Soulé
LEADER IN STEEL BUILDINGS

SOULE' STEEL COMPANY

SAN FRANCISCO • PORTLAND • LOS ANGELES • SEATTLE • SPOKANE • PHOENIX • DALLAS • SALT LAKE CITY